FOUNDED IN 1856

RAILWAY AGE

THE STANDARD RAILROAD WEEKLY FOR ALMOST A CENTURY

A.R.E.A. PRE-CONVENTION NUMBER MARCH 10, 1952

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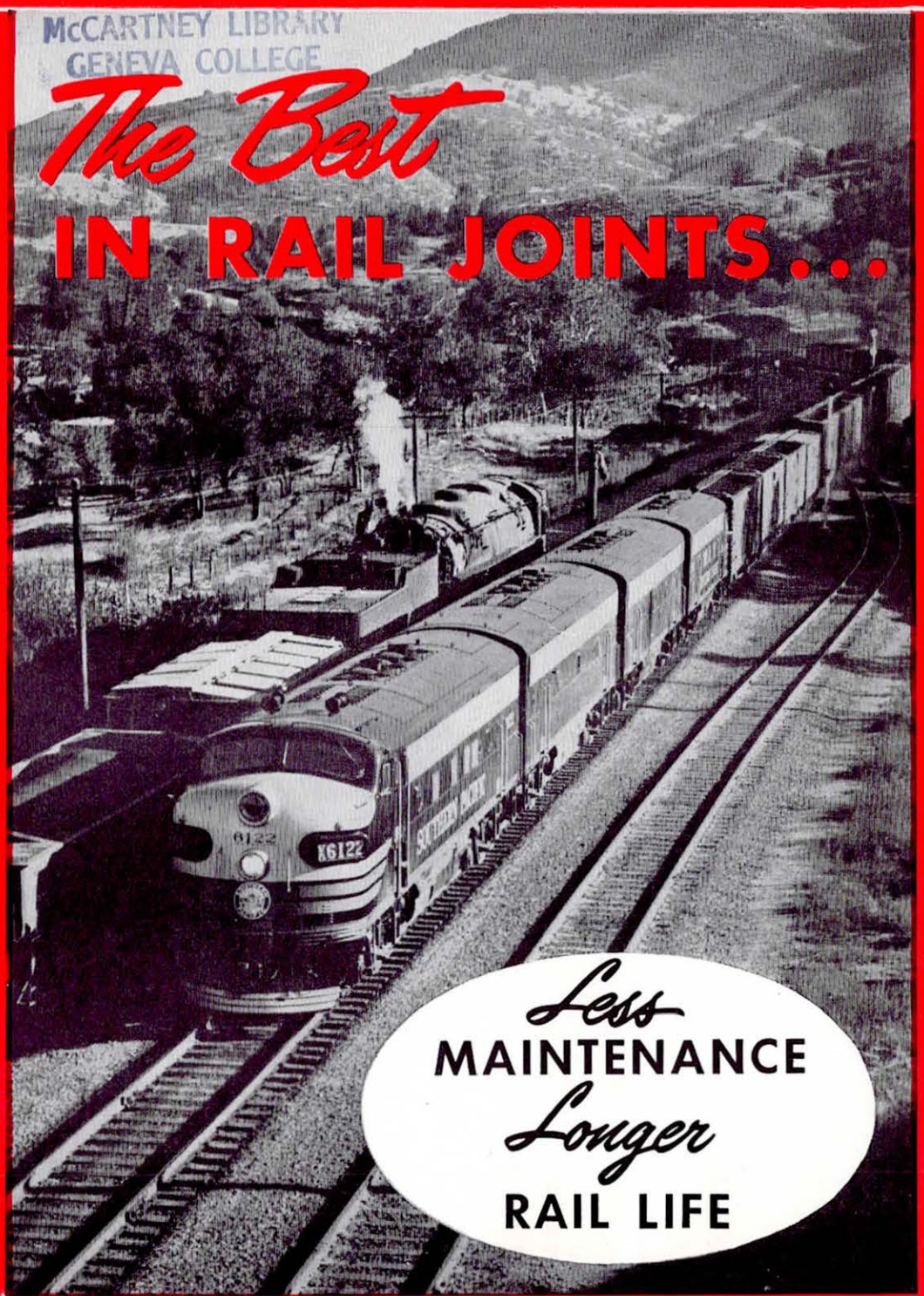


THE RAIL JOINT COMPANY Inc.

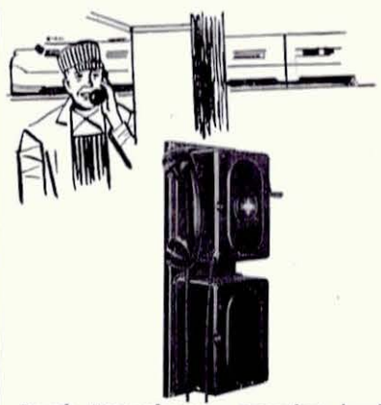
50 CHURCH ST. NEW YORK 7, N. Y.

Automatic Electric

plans communication equipment specifically for you!

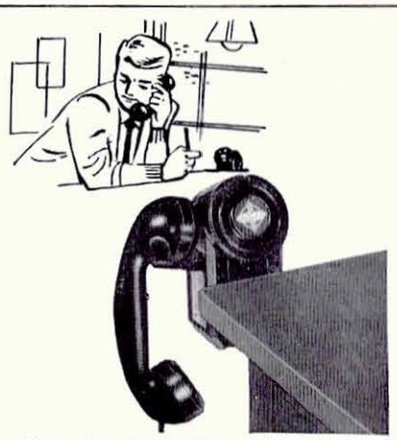
P-A-X Business Telephone Systems—P-A-X automatic telephones—owned by the user—provide fast communication within one office—or link several offices into an integrated network.

West Test Set—a time-saver that helps linemen find faults quickly, to restore service promptly.

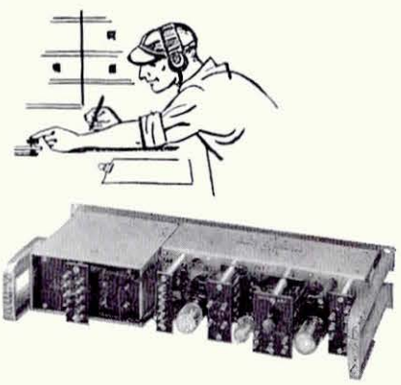


Booth Monophones — convenient handset permits correct talking position to send messages clear and strong—no garbled words to confuse or delay orders.

Intra-Train Telephones—provide fast end-to-end communication for train crews—help them provide passenger-pleasing services.



Dispatchers' Telephones—have circuits designed just for railroads, with high efficiency and low bridging loss that permits talking to more stations—with exceptional clarity.



Lenkurt Carrier—adds new low-cost telegraph and telephone channels on long and medium haul circuits.

Up in the offices or out in the yards, on trains or along the right-of-way—use Automatic Electric communication equipment anywhere! There's equipment for every need, and every type has every feature you want, because your needs are considered *before* the equipment is designed.

The six examples illustrated are only a part of a broad line—based on railroading's own requirements and backed by years of communication engineering experience. Write for complete information on any product—or let us help with any special problem.

Other items include: Portable Telephones • Voice Frequency Repeaters • Relays for every purpose • Switches and Keys • Equipment, tools and materials for your line crews • **Everything you need for good communications.**

AUTOMATIC ELECTRIC

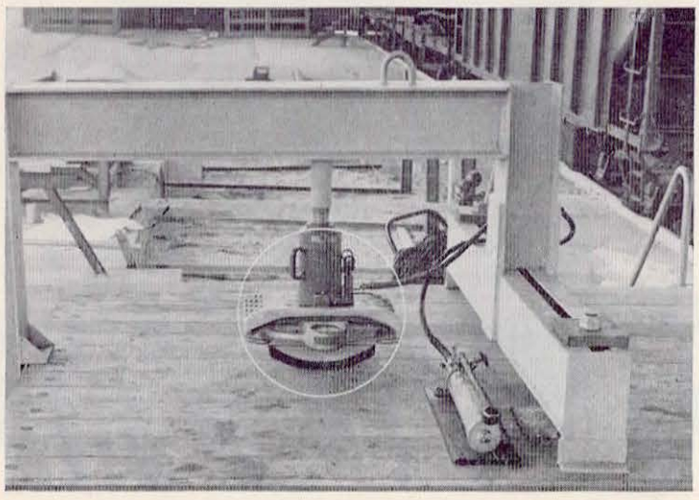
Makers of Telephone, Signaling and Communication Apparatus . . Electrical Engineers, Designers and Consultants

Distributors in U. S. and Possessions: Automatic Electric Sales Corporation
Export Distributors: International Automatic Electric Corporation
1033 West Van Buren Street, Chicago 7, U. S. A.

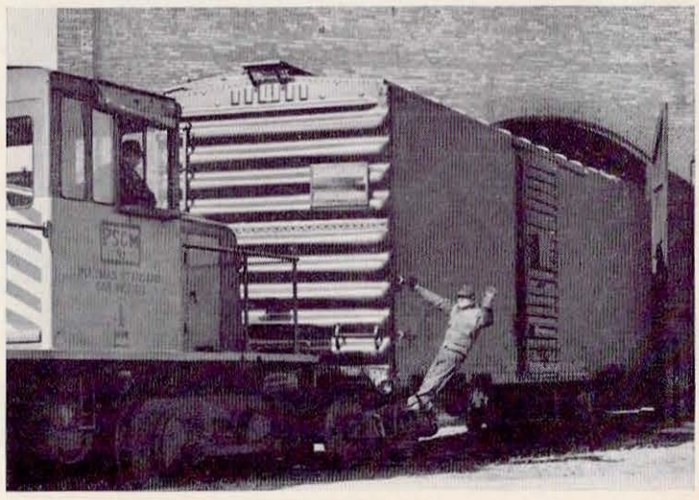
MINER *Class* A-22-XL
FRICTION DRAFT GEAR

W. H. MINER, INC. CHICAGO

Field fact-finding gets the significant operating and performance data that makes better box cars possible. For example, on-the-job studies by Pullman-Standard field engineers showed that loading machinery, especially when used for steel, newsprint, etc., had loads as high as 10,000 pounds per wheel. This fact led to the improved floor construction described below.



Simulated floor load. The field data and many tests of floor thicknesses, channel sizes and stringer locations resulted in a stronger floor. Two floor stringers were added, for a total of six, plus a cross-tie. Note that the curved shoe on the testing jib stimulates a loading truck wheel. A force equal to 40,000 pounds can be applied at this point.



1—or 3,000. Steady production of as many as 1,000 PS-1s per month makes an order for 1 to 3,000 freight cars possible and *practical.* Each PS-1 is a standardized car—and each is built to the specifications of Pullman-Standard. Each assures the advantages of specialized engineering and the economies of continuous production.

SUBSIDIARY OF

CAR BUILDING DIVISION **PULLMAN**

BIRMINGHAM · CLEVELAND · PITTSBURGH · **79 EAST ADAMS STREET**

112,000 miles of engineering

Looking for trouble, while traveling more than a hundred thousand miles a year . . . that's the job of Pullman-Standard's sales and service engineers. Because they are studying actual conditions, searching for factors which effect the performance of the PS-1, they often succeed in heading off trouble before it happens.

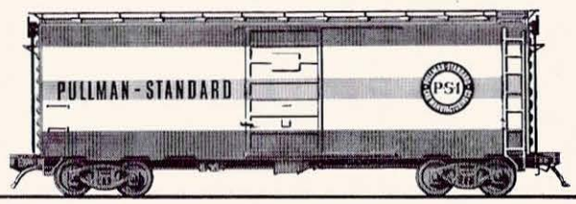
to keep the PS-1

The field data provides the essential operating facts for Pullman-Standard's research and development departments. Thus, engineering that starts in the field becomes the plans and specifications for the production of the PS-1. In this way, it is possible to keep on improving the PS-1 . . . to continually keep making it a better and better buy. An example of field data that became a product improvement through research and development is illustrated on the left.

up to the "Pullman" standard

The PS-1 is being bought and reordered by a big majority of the railroads. Quantities run from 1 to 3,000. Any railroad can order as many PS-1s, or as few, as needed. The 50,000 PS-1s produced, or on order, are proof that quality as well as economy leads to the selection of the PS-1. If you are interested in faster delivery of an outstanding box car . . . at lower cost . . . get the facts about the PS-1 and the reasons why it has earned such wide acceptance in just five years.

The RECORD BREAKING PS-1

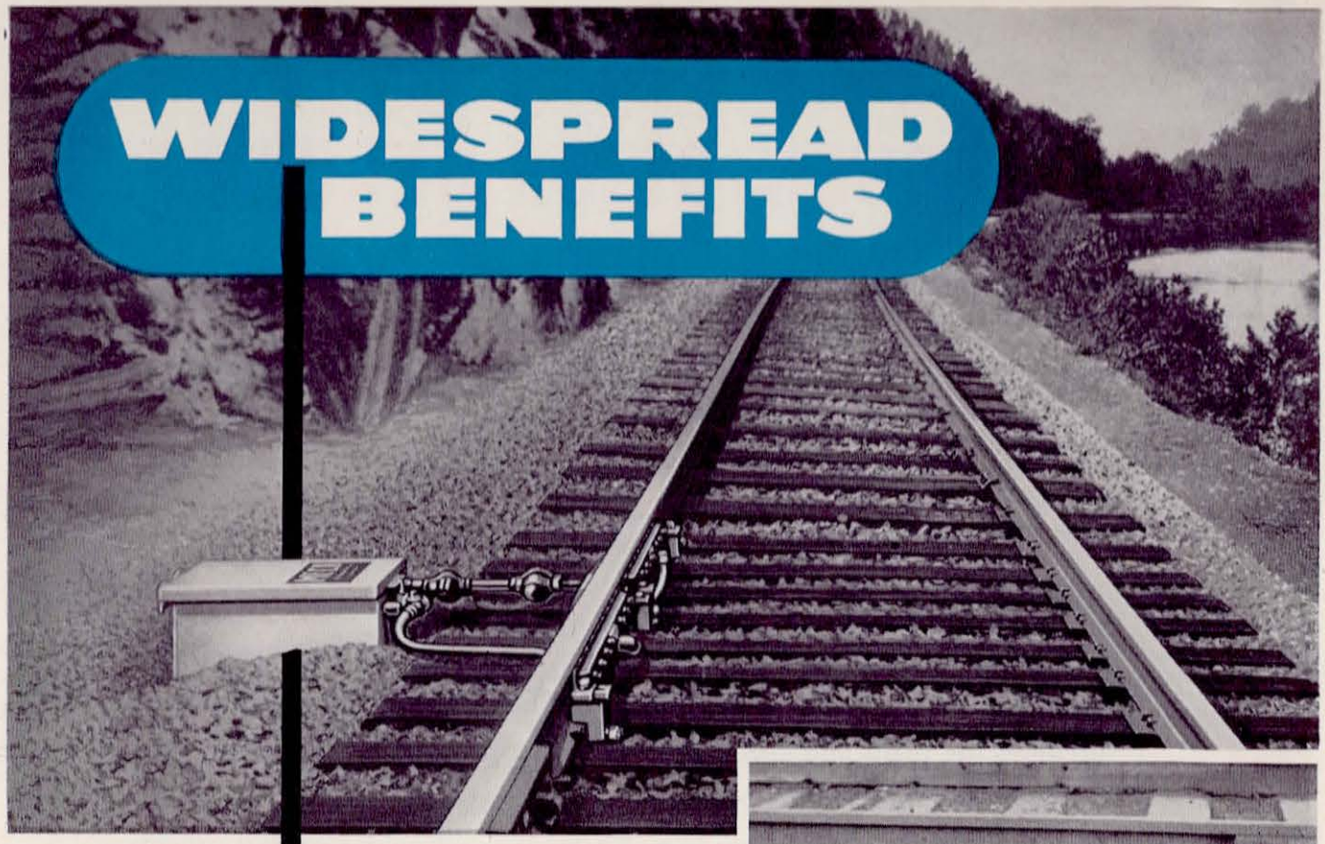


PULLMAN INC.,

STANDARD CAR MANUFACTURING COMPANY

CHICAGO 3, ILL. • NEW YORK • SAN FRANCISCO • WASHINGTON

WIDESPREAD BENEFITS

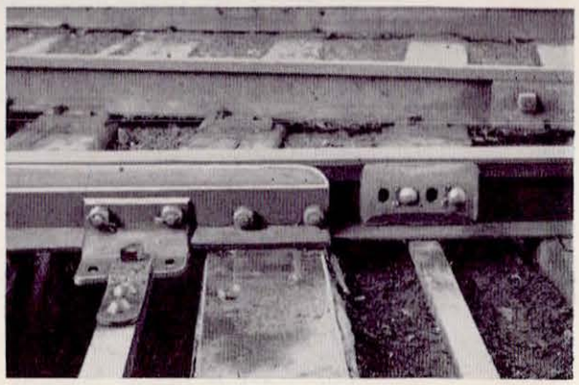


Meco Rail and Flange Lubricators

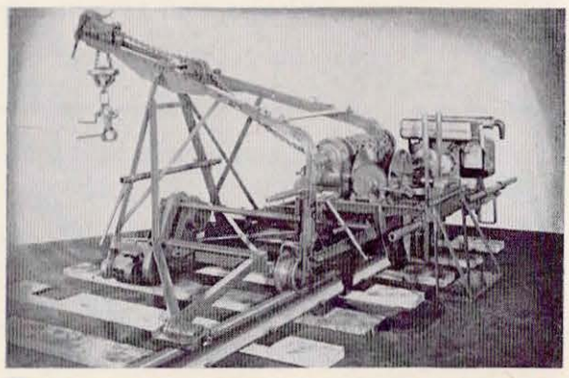
Meco Rail and Flange Lubricators produce benefits which reach far beyond the Track Maintenance Department—where they reduce wheel-thrust and friction wear, prolonging the life of rail, ties, and track fastenings.

They are welcomed by Enginemen and Trainmen because they reduce curve friction, make higher speeds possible with safety, and reduce draw-bar pull.

Management and Operating Department Officers "in the know "realize lubricated curves make traffic safer, reduce cost of maintaining track and rolling stock.



MACK REVERSIBLE SWITCH POINT PROTECTOR — Original application prolongs switch rail life 4 to 5 times; then it's removed, reversed, reapplied and prolongs switch rail life for another 4 to 5 times.



MECO POWER RAIL LAYER — Four men with one Meco Rail Layer, lay standard length rail economically. Two or three standard Meco Rail Layers are ideally suited for the laying of 2-and-3 length welded rails and "Ribbonrails".

B5884

★ Maintenance Equipment Company ★

RAILWAY EXCHANGE BUILDING • CHICAGO 4, ILLINOIS

Vol. 132, No. 10 March 10, 1952

RAILWAY AGE

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Railway Signaling & Communications Car Builders' Cyclopedia Locomotive Cyclopedia
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5 reasons for specifying "UNION" mechanical facing point locks at Spring Switches

You can expedite traffic with safety . . . BECAUSE

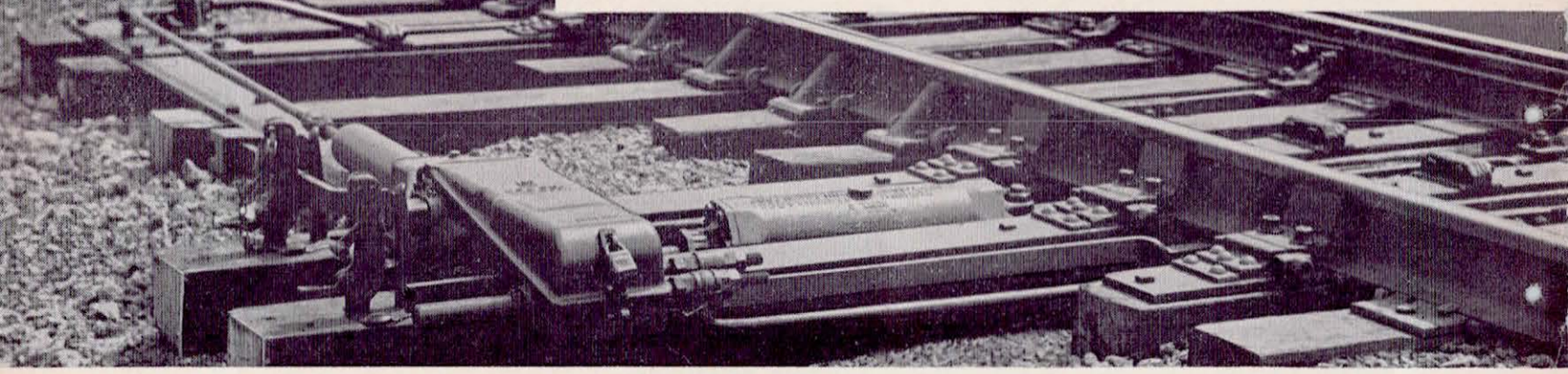
1. For trailing moves against the closed point, the "Union" Mechanical Facing Point Lock retains all the advantages of the spring switch.

2. The mechanism securely locks the switch points for facing-point moves.

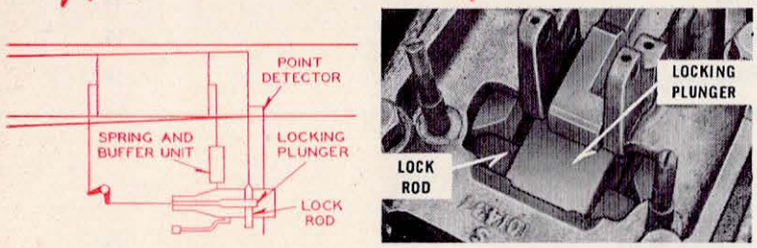
3. The locking is restored automatically, by a powerful spring, after a trailing move.

4. A built-in circuit controller for signal control checks that the switch is properly positioned and *locked.*

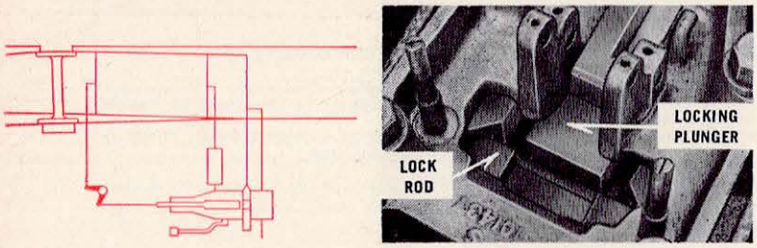
5. Through a point detector, the circuit controller continuously checks that the switch points are in the correct position and have not been damaged.



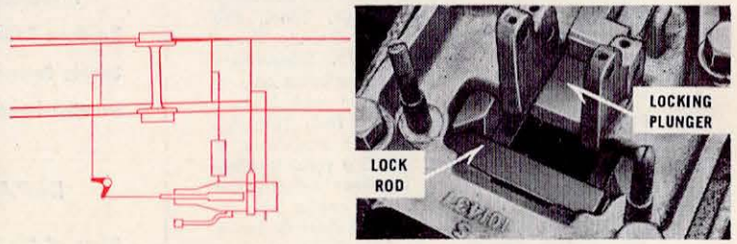
This is what happens . . . when a train trails a spring switch equipped with a "Union" Mechanical Facing Point Lock.



A. In the normal position of the spring switch, the standard lock rod is firmly engaged by the locking plunger of the Mechanical Facing Point Lock.



B. The flexing of the switch points by the leading wheels of the train automatically withdraws the locking plunger from the lock rod before the spring head rod starts to move.



C. As the train advances, the unlocked points are forced open against the spring action of the switch . . . and after the train has cleared the switch, the points are returned to normal and locked.

Ask our nearest district office for complete information.

UNION SWITCH & SIGNAL

DIVISION OF WESTINGHOUSE AIR BRAKE COMPANY

SWISSVALE PENNSYLVANIA

NEW YORK CHICAGO ST. LOUIS SAN FRANCISCO

WEEK AT A GLANCE

CURRENT RAILWAY STATISTICS

Operating revenues, twelve months	
1951	$10,390,672,580
1950	9,473,093,128
Operating expenses, twelve months	
1951	$8,041,223,177
1950	7,059,242,353
Taxes, twelve months	
1951	$1,203,238,466
1950	1,194,615,254
Net railway operating income, twelve months	
1951	$942,696,259
1950	1,039,621,540
Net income, estimated, twelve months	
1951	$693,000,000
1950	783,000,000
Average price railroad stocks	
March 4, 1952	57.02
March 6, 1951	57.00
Car loadings, revenue freight	
Eight weeks, 1952	5,714,026
Eight weeks, 1951	5,709,134
Average daily freight car surplus	
March 1, 1952	8,372
March 3, 1951	1,236
Average daily freight car shortage	
March 1, 1952	2,854
March 3, 1951	37,828
Freight cars delivered	
January 1952	8,642
January 1951	5,949
Freight cars on order	
February 1, 1952	120,251
February 1, 1951	144,758
Freight cars held for repairs	
February 1, 1952	91,689
February 1, 1951	90,045
Net ton-miles per serviceable car per day	
December 1951 (preliminary)	939
December 1950	988
Average number railroad employees	
Mid-January 1952	1,221,846
Mid-January 1951	1,254,110

In This Issue . . .

ENGINEERING OFFICERS of the railroads have much to talk about with each other when each March they congregate in Chicago at the annual A.R.E.A. meeting. This year is no exception, as will be seen from the convention program in this issue (page 38). Inflation has made their jobs, in terms of dollars, bigger than ever in history. Budgets—analyzed in some detail in the article this week on page 39—come to such imposing totals as $1,880 million for maintenance of way and structures, $450 million for fixed property "A & B" capital outlays, and 2-plus million tons of rail.

MAINTENANCE EQUIPMENT UPKEEP is no haphazard operation on the Chesapeake & Ohio. There is a specially designed, specially equipped shop, centrally located, to deal systematically with repair and overhaul tasks for the whole Chesapeake district, and there is a skilled organization of supervisors and field inspectors to see that work-equipment machines all over the property are kept in good condition. For more about this shop, and the organization behind it, see page 42.

In Washington . . .

EX PARTE 175 arguments have been concluded before the I.C.C. Now it's up to the commission to hand down a judgment shaped by the National Transportation Policy's injunction to "foster sound economic conditions in transportation."

ST. LAWRENCE SEAWAY advocates are taking a new tack in Congress, apparently recognizing that straight-out tapping of the government till to dig this fantastic ditch just isn't likely to be voted. Now they would set up a corporation to "develop" the river. Of course Uncle Sam would own all the corporation's stock, and its bonds would be "guaranteed" by American taxpayers. Just how this sort of financial legerdemain would keep the river from freezing tight for five months, or make a 27-foot channel passable to 35-foot ships, or collect tolls from carriers that prefer to keep costly vessels on the move between accessible harbors, the dig-the-ditch-despite-anything advocates have failed to elucidate.

STEEL FOR FREIGHT CARS may be available in greater quantities, and sooner, than any of the government's forecasters and allocators and calamity callers-up have been willing to admit—at least in public. This is, at any rate, a fairly general opinion in informed

WEEK AT A GLANCE

industrial circles, according to dependable reports from those quarters. Meanwhile D.T.A. Director Knudson has suggested to a congressional committee that reaching and maintaining for at least a couple of years an output of 10,000 cars per month is the only way to assure a car supply adequate to "work out of this car shortage." If that rate can be attained in the reasonably near future, Mr. Kundson thinks the railroads will *order another 100,000 cars.*

. . . And Elsewhere

EDITORIAL FALLIBILITY: In the leading editorial discussion in last week's issue we referred to this paper's opposition to the extraction of the teeth of Section 15a of the Interstate Commerce Act in 1940. Our alert Washington editor, Walter Taft, sets the record straight by reminding us that the destructive dental work was done on this section in 1933—along with other assorted New Deal damage to the railroads' regulatory burden.

A COUPLE OF RAILROADS, we hear, have gone a long way in perfecting a system for separate accounting of repair costs for each series of cars—so it will be readily revealed whenever repair costs for a given series pass the point where continued repairs are economical.

NELSON C. DEZENDORF has assumed responsibility for management of the Electro-Motive Division of the General Motors Corporation. The eventuality of 100 per cent dieselization of railroads does not worry him for, as he points out, railroads that were fully dieselized several years ago have remained good customers—not just for parts and service but often for still more locomotives. His appointment as general manager of E.M.D. on February 26 followed the death of B. A. Dollens (Railway Age, February 18, page 13). On March 3, Mr. Dezendorf also was elected a vice-president of General Motors.

AN INTER-PROVINCIAL BATTLE ROYAL appears to be shaping up before the Canadian Board of Transport Commissioners over allocation of the $7-million-a-year federal grant toward maintenance and operation of railway "bridge" lines across sparsely settled northern Ontario. The money, it seems to be generally agreed, will be so applied as to reduce freight rates between eastern and western Canada, with western consignees probably benefiting most from rate reductions on westbound traffic. The disagreement comes on the method of reduction. Manitoba, most easterly of the western provinces, thinks the dollars-and-cents cut on any given shipment across the "bridge" should be the same, regardless of western destination. Saskatchewan, Alberta and British Columbia, however, want larger relative reductions on the theory that distance makes their rates higher to begin with.

REDUCTION OF TRUCK AXLE LOAD LIMITS from 22,400 lb. to 18,000 lb. is being urged by a group of New York state's county highway officials. The proposed 18,000-lb. limit, according to the officials' spokesman, is now in effect in 35 states, while the present 22,400-lb. limit is as high as any in the country. As some of the officials said in supporting the proposal: "Heavy trucks take a heavier toll of our roads than any other single factor." . . . "The majority of roads were not built to carry this burden." . . . "The reduced load limit certainly would save us a great deal of money each year."

COMPETITION FOR THE TRAVELER'S DOLLAR—already pretty hot among all forms of transport offering service between California and the Pacific Northwest—has grown more intense since inauguration of daylight air coach flights by United Air Lines in January. The air line formerly confined such daylight service to San Francisco-Oakland—Los Angeles-Burbank flights. Now it has been extended to include Portland, Ore., Seattle, Wash., and Tacoma on the north and Long Beach, Cal., and San Diego on the south.

TWO IMPORTANT IMPROVEMENTS

in the JACKSON Multiple TAMPER

WILL FURTHER ENTRENCH ITS POSITION AS THE FINEST OF BALLAST-PLACING MACHINES!

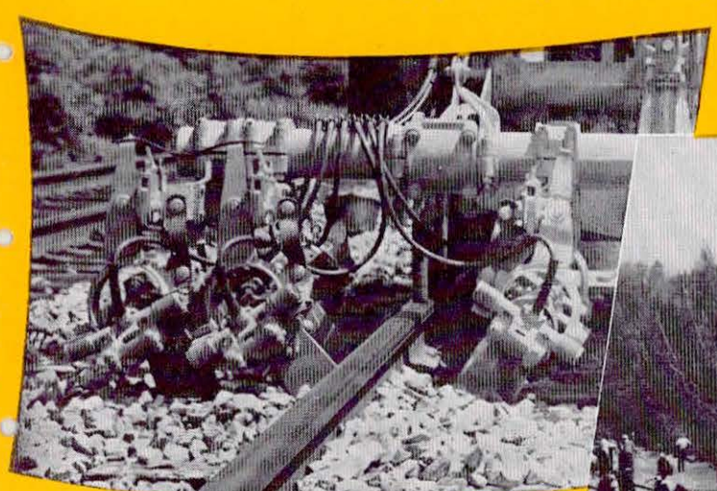
1 THE BUILT-IN HYDRAULIC INDEXER — FOR SMOOTH, EFFORTLESS MOVEMENT AND POSITIONING OF THE MACHINE FROM TIE TO TIE.

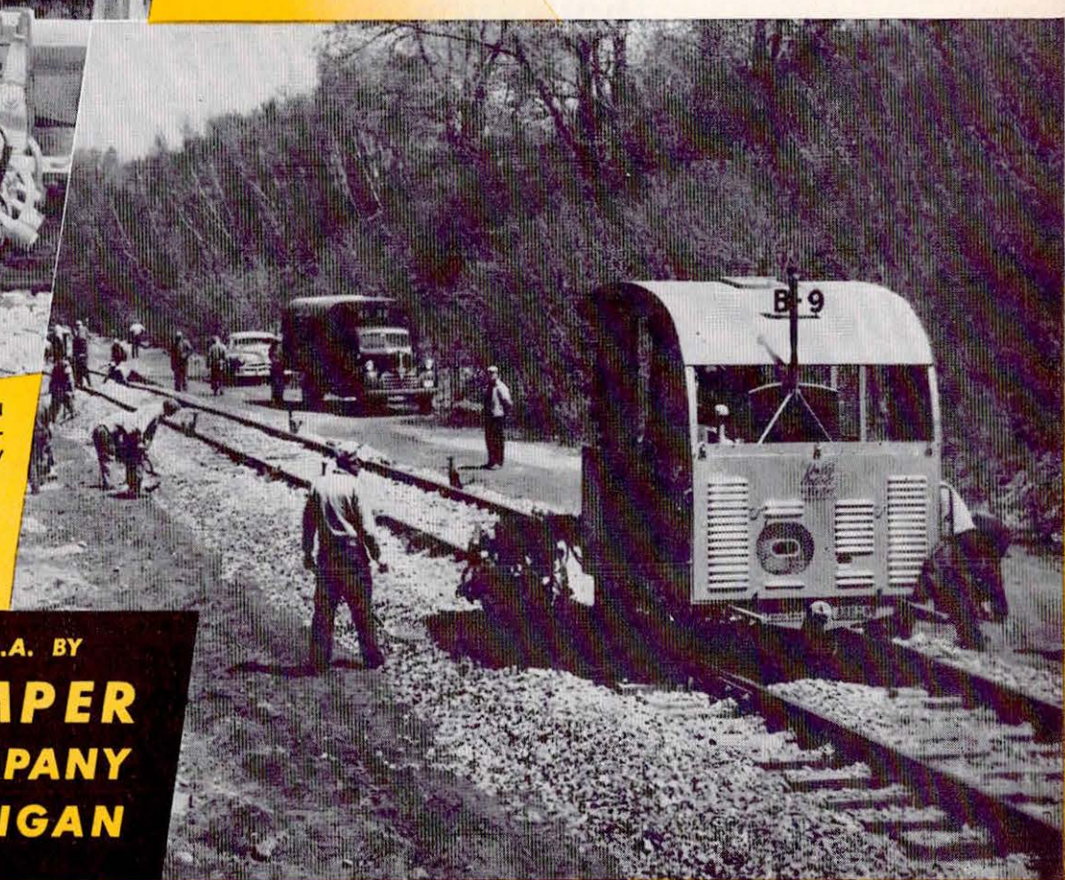
Forward and reverse are instantaneous and braking action of the indexer in either direction is fast, positive and cushioned — with no more effort required from the operator than a flick of the control lever. This feature greatly reduces operator fatigue, considerably steps up progress, and eliminates any necessity of extra hands on stiff curves and grades.

2 THE HYDRAULIC SET-OFF LIFT — FOR 3-MAN, 60-SECOND REMOVAL FROM TRACK.

Two men and the operator is all it takes with this device to remove the Jackson Multiple from the track, and it is easily done in 60 seconds. A turn of the Lift Lever at the control stand raises the machine in a matter of 2 or 3 seconds to permit placing of set-off rails. It is then instantly lowered and almost as quickly pushed into position — a tremendous advantage on hot track.

With THESE IMPROVEMENTS and its previously demonstrated superiority, there can be little question in the mind of the track man who has the facts that the Jackson Multiple will give you better track at less cost than may be had with any other equipment. We will be glad to supply those facts, or if you wish to see what it actually will do on your own track, we will be glad to place one with you on a rental basis. The record shows that in nearly every case they will more than save their cost in a single season.





The only Multiple Tamper that Tamps the Vital Spot—the load-bearing zone directly beneath the rail.

MFG. BY
JACKSON VIBRATORS INC.
LUDINGTON, MICH.

SOLD IN U.S.A. BY

ELECTRIC TAMPER & EQUIPMENT COMPANY
LUDINGTON, MICHIGAN

"...and here's something that cost us thousands of dollars this winter!"

This railroad executive is making an important point. Listen:

> *"After a careful check this winter, we proved that big steam losses were caused by these old, complicated car-heating systems. And you know what steam losses did to our schedules! In trying to remedy this poor operating condition, we spent entirely too much money on inspections, maintenance and adjustment . . ."*

If you have out-dated heating systems you've probably lost a lot of the same kind of money.

Yet, *you can end such losses* if you will install *Honeywell Car Heating Systems* in your trains. Modernizing your cars *now* can result in substantially *lower operating costs next winter!* And this includes modernizing *new* cars being delivered now!

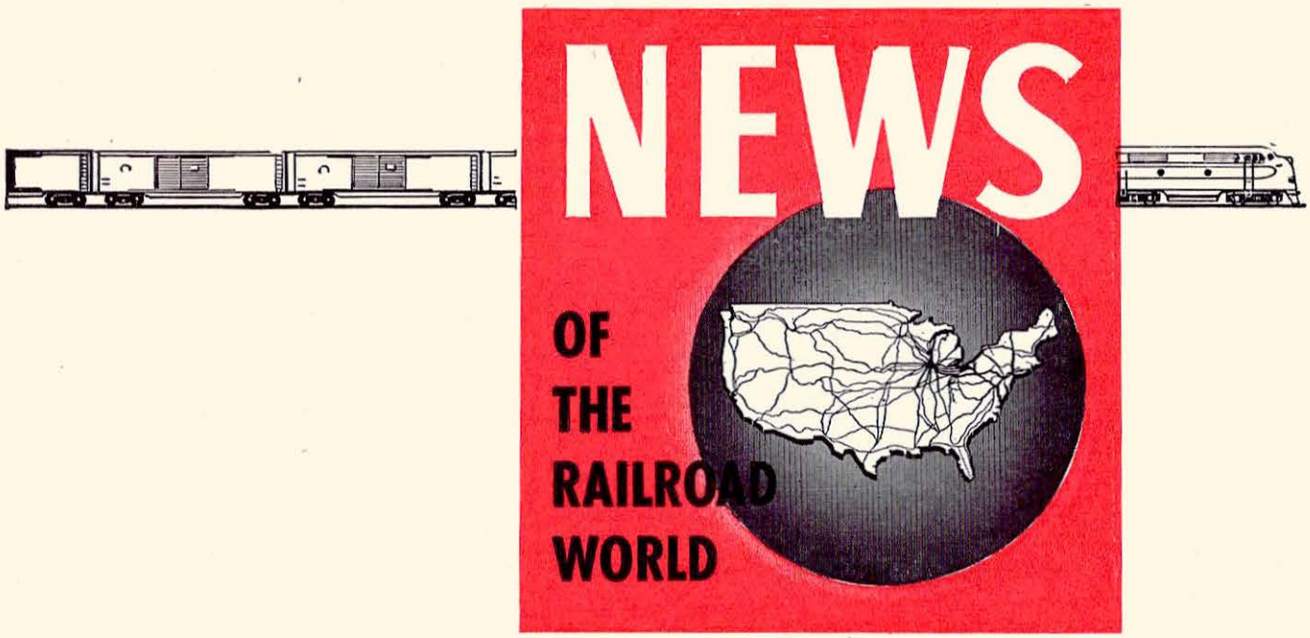
You see, these exceptional Honeywell systems actually *save up to 40% on steam,* for they have a bare minimum of undercar piping – the major cause of wintertime steam loss. Also, these systems are simply designed, with fewer parts, so inspection, maintenance and adjustment labor are greatly reduced. This also speeds turn around of cars. It is estimated that railroads now installing Honeywell Car Heating Systems will realize *yearly savings of tens of thousands of dollars!*

These are but a few of the many facts about the money-saving benefits you can expect from Honeywell Car Heating Systems. For specific data on what Honeywell heating can do for your railroad, call *your* local Honeywell office – there are offices in 91 key cities from coast to coast. Or write to Honeywell, Dept. RA-3-65, Minneapolis 8, Minn.

MINNEAPOLIS **Honeywell**

H HONEYWELL

First in Controls



Jobless Pay Liberalizers Get Hearings Before Two Congressional Committees

Bills proposing to liberalize the benefit provisions of the Railroad Unemployment Insurance Act were the subject of hearings held last week by the Senate Committee on Labor and Public Welfare and the House Committee on Interstate and Foreign Commerce. Several such bills, with identical provisions, have been introduced recently, including S.2639, sponsored by a group of senators headed by Senator Murray, Democrat of Montana, who is chairman of the Senate committee, and H.R.6525, sponsored by Representative Crosser, Democrat of Ohio, who is chairman of the House committee.

The bills are being supported by railroad labor organizations and opposed by the railroads. The payroll tax which supports the act's insurance set-up for unemployment and sickness is paid entirely by the railroads.

The opposition presentations at the hearings were made on behalf of the railroads by three officers of the Association of American Railroads—J. Carter Fort, vice-president and general counsel, J. M. Souby, general solicitor, and Dr. J. H. Parmelee, vice-president and director of the Bureau of Railway Economics. Principal presentations in support of the bills were those of spokesmen for the Railway Labor Executives' Association—George M. Harrison, grand president of the Brotherhood of Railway Clerks, and Lester P. Schoene, attorney R.L.E.A.

The A.A.R. officers estimated that the bills proposed benefit increases amounting to "40 to 50 per cent," and that the annual increase in total benefit payments would amount to "more than $30,000,000." Mr. Harrison put it this way: "Based on the actual distribution of beneficiaries in the 1950-51 benefit year the overall increase is 35.6 per cent for unemployment due to lack of work and 41.2 per cent for unemployment due to sickness."

The higher benefits proposed, Mr. Fort said, "would place railroad unemployment compensation, already more liberal than that of most states, far out of line with the state systems." He went on to warn against "the illusion that the railroads would not be greatly burdened" by such a set-up.

The latter was a reference to the fact that there would be no immediate increase in the unemployment insurance tax which is on a sliding-scale basis. It ranges from 0.5 per cent to 3 per cent of taxable payroll, depending upon the size of the reserve fund; and it is now at the minimum of 0.5 per cent.

"All the resulting increases in benefits would not be reflected in increased taxes at once," Mr. Fort said. "There are admittedly reserves now accumulated in the unemployment fund, but they are there because of the levying of excessive taxes in the past. Sooner or later the payroll tax must rise to meet the increased costs of proposed benefits, if enacted."

The A.A.R. vice-president and general counsel also contended that the railroad employee is already treated "more liberally than workers in other industries." He explained that only four state systems have sickness benefits, and in all four the employees contribute. And he went on to suggest that the railroads "should not be put into the position of having to pass on to shippers additional expenses for railroad unemployment compensation

Wide World

"QUEENIE," unofficial canine car inspector for the Chicago, Rock Island & Pacific at Trenton, Mo., is said to be an expert at sniffing out hot journal boxes and spotting leaks in air hoses. A resident of the yards for some three years, she uses her bark to warn August C. Kroeger, car inspector, D. B. Shea, agent, and other employees whenever she smells a potential source of trouble. (P.S.—She works 15 hours a day, seven days a week!)

that is much more liberal than that the shipper is providing for his employees."

Mr. Souby pointed out that the proposed increases in benefits "would come on top of past liberalizations which have raised unemployment benefit rates by at least 92 per cent since 1938." Such increases, he added, "have far exceeded the increase in the cost of living and have kept pace with the average increase in railroad wages during the same period."

Meanwhile, Mr. Harrison had contended that the bills did not seek to increase the protection "relatively"; they undertook "merely to give in terms of present values a degree of protection comparable to that we formerly had."

According to his figures, the proposed increases in daily benefit rates range from 30 per cent to 60 per cent. He also pointed out that minimum base-period earnings required to qualify for benefits in the related benefit year would be raised from $150 to $300.

Prospective Costs

As to prospective costs, Mr. Harrison insisted that the added benefits "will not have any immediate effect on payments required from the carriers and will not have such an effect for some years." He calculated that the reserve, as of June 30, 1951, was "more than $350,000,000 above the point at which the sliding scale would call for a 1 per cent contribution in lieu of an 0.5 per cent contribution."

Senate Committee Opens Hearings on Transport Bills; Motor Carriers Begin Presentations

The Senate Interstate and Foreign Commerce Committee on March 3 opened what will probably be a month's public hearings on pending transportation legislation. More than 50 persons have requested time to testify on one or more of the 32 bills before the committee.

Most of the bills would amend or add new provisions to the Interstate Commerce Act. Many of them were introduced by Senator Johnson, Democrat of Colorado and chairman of the Senate committee, as a result of the so-called Myers committee hearings of two years ago.

First witnesses as the hearings opened were representatives of the motor carriers. The American Trucking Associations made major presentations on S. 2363, the bill which proposes federal size and weight limits for motor vehicles; and on S. 2518, the bill designed to eliminate delay in increasing freight rates to meet increased costs.

J. M. Hood, president of the American Short Line Association, testified on March 5, the first railroad witness to appear. His principal testimony was directed to S. 1018, a bill which would require the Interstate Commerce Commission to consider replacement costs in setting per diem rates. It would also give the commission authority to impose penalty per diem rates in time of a car-shortage emergency. Mr. Hood and the short lines are opposing this bill.

Of all the bills touched on by these opening witnesses there was unanimous opposition to only one. This was S. 2352, the bill which would require the I.C.C. to assess a yearly "fee" on each holder of a certificate, permit or license.

Appearing during the first three days of the committee hearings, in addition to Mr. Hood, were: John V. Lawrence, managing director, and Edgar S. Idol, general counsel of A.T.A.; Chester C. Thompson, president of American Waterways Operators; Jack G. Scott, general counsel, National Association of Motor Bus Operators; John R. Mahoney of the Association of I.C.C. Practitioners, and J. F. Rowan, general manager, Movers' Conference of America.

Mr. Lawrence of A.T.A. made presentations on several of the pending bills, but his principal argument was directed against the proposal to establish federal size and weight maximums for trucks.

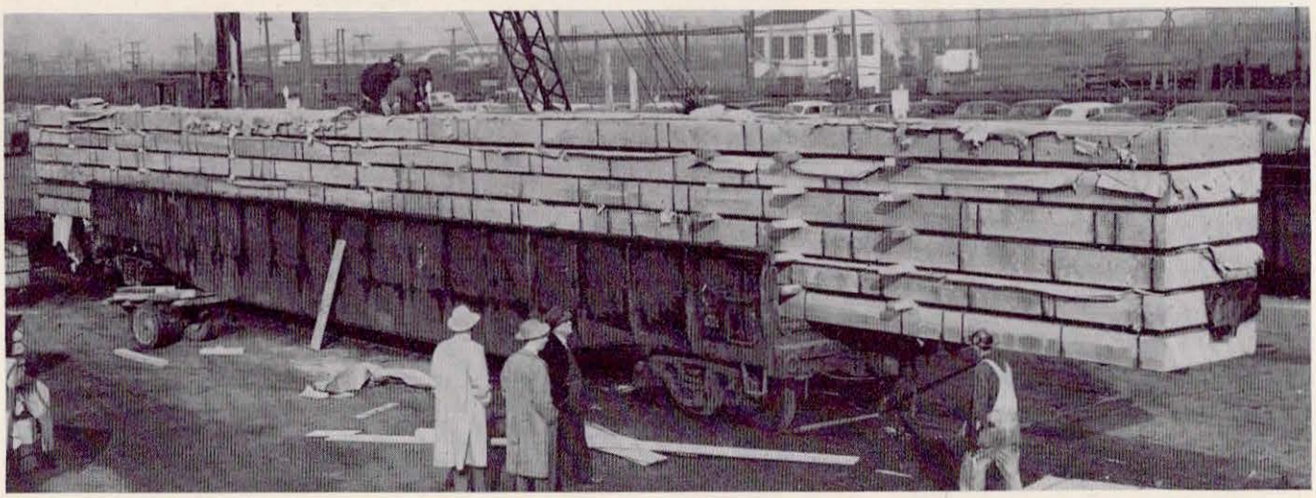
Not Justified

This proposed limit on truck capacity would stunt the economic development of areas that must depend on highways, he told the committee. He said the 18,000-lb. and other dimensional figures in the bill were originally stated in New York state traffic regulations in 1914, and he declared that "no available data" today justify an 18,000-lb. weight ceiling.

States are today joining in setting up test-roads to examine the axle-load problem, Mr. Lawrence said. They are doing this, he said, because highway engineers "realize there is no factual information available upon which to establish definite axle weight-limits at this time." Mr. Lawrence dismissed the recent Maryland road test as inadequate, saying the test road in that case was not representative of "many miles of existing pavements in this country."

Senator Bricker, Republican of Ohio, and a member of the Senate committee, was present during Mr. Lawrence's discussion. The senator cited cases of Ohio roads being "torn all to pieces," and "squashed up in the center," as a result of heavy trucks. He said the "great public need" is for immediate action to save the highways, rather than await the outcome of long delayed road tests.

He was joined on this point by Senator Johnson, sponsor of the weight-limit



LAMINATED FIR BEAMS—each 97 feet long and weighing 7½ tons—comprised this unusual shipment handled recently from Portland, Ore., to Litchfield, Ill. Each beam contained more than 37,000 board feet of lumber. Here the Union Pacific is preparing the massive beams (which will support the roof of a new school gymnasium) for shipment. Idler flat cars were later connected to the gondola—one at each end, and then the beams were ready to roll.

bill. Senator Johnson suggested that motor carriers oppose federal legislation "because it is going to be enforced, and you like state laws because they aren't always enforced." Mr. Lawrence said A.T.A. has tried, in several states, to have heavier penalties prescribed for those violating weight laws; but it was Senator Johnson's conclusion that A.T.A.'s argument against this bill "falls flat on its face."

Mr. Idol, the A.T.A. general counsel, appeared before the committee March 3, commenting on eight of the pending bills. Among these was S. 2518.

"I think this is the most important legislation before this committee at this time," Mr. Idol said. A.T.A. is supporting the bill, provided several amendments are made — including one to make the legislation applicable to motor carriers as well as to the railroads.

"Relief from undue delay is even more essential to common motor carriers than to the railroads, at least during period of high traffic volume," Mr. Idol declared. But if this bill were passed, and the commission's control over increasing rates were removed, there is no sound reason for exempting common carriers from control by the Office of Price Stabilization, he said.

Another amendment which A.T.A. wants added is one which would direct the I.C.C. to require carriers proposing a general rate increase to apply that increase to all traffic handled. This is the same position A.T.A. took during recent hearings in Ex Parte 175. They say they fear selective rate cutting by the railroads.

Water Carriers

Domestic water carriers are opposed to the enactment of S. 2518, according to Mr. Thompson of American Waterways Operators. He said water carriers are "anxious" to reduce the time lag between increased operating costs and increased freight rates, but they do not believe the proposal contained in this bill will be of "material assistance." He said the I.C.C. already has the authority contemplated "although admittedly it seldom, if ever, uses such authority." The authority is the commission's discretion to permit rate-increases proposals to become effective without suspension.

Mr. Mahoney of the I.C.C. practitioners made the principal presentation against S. 2352, the bill that would establish a "fee" system at the I.C.C. Mr. Mahoney called the bill "a pure revenue measure," and said Congress would in effect be turning over to the commission its taxing power. Both he and other witnesses testified as to the "almost impossible" job of administering such a law.

There was general endorsement from everyone as to the need for S. 2355. This bill would enable representatives of carriers and the government to reach final contracts on Section 22 rates, i.e., it would preclude the filing of complaints assailing such rates, as the government has done in some of the so-called reparations cases pending before the I.C.C. Mr. Hood urged passage of this bill, as did Mr. Idol, Mr. Thompson, and Mr. Scott of the bus operators association.

Knudson Expects Orders For 100,000 More Cars

Administrator Knudson of the Defense Transport Administration thinks railroads would order "another 100,000" freight cars if a production rate of 10,000 per month could be attained and maintained on cars already ordered.

With such additional orders, and the 10,000-car production rate, Mr. Knudson believes "we could work out of this car shortage by about the first part of 1954." Meanwhile, he fears that, "as material allocations are going, it will be several years after that before we are out of the woods."

The D.T.A. administrator, who is also a member of the Interstate Commerce Commission, made these statements in recent testimony before a House appropriations subcommittee which has under consideration the appropriations proposed for commission activities during the next fiscal year beginning July 1. Other members of the commission also appeared at the subcommittee's hearing, the record of which has been made public.

Generally, the presentation of the commissioners was along lines of that made in the commission's annual report to the effect that reductions in appropriations are bringing about "de-

POPULAR WITH TEEN AGERS especially are the ski trains which the Denver & Rio Grande Western operates from Denver to Winter Park, Colo., each Saturday and Sunday during the winter sports season, starting about December 1 and continuing through April. Parents like the Saturday trip because the youthful skiers are under careful surveillance from the time they leave Union Station, Denver, until they return—on time. No liquor is permitted aboard. Most of the teen agers buy a "package deal" which includes ski lessons at a ski school, lunch ond train fare. The railroad fare for all skiers is $2.30, including tax, for the 114-mile trip. Winter Park is at the west portal of the 6.2-mile Moffat tunnel, and lies at an elevation of 9,058 feet above sea level. The Rio Grande has been running the ski trains for four years. Patronage shows a 10 per cent improvement over that of the previous season.

regulation" of transport agencies under commission jurisdiction (*Railway Age*, February 18, page 48). It was brought out that the commission asked the Bureau of the Budget to endorse for its fiscal 1953 activities proposed appropriations totaling $14,300,000. The fiscal 1953 budget, as submitted to Congress with President Truman's budget message, cut this to $11,778,000; and the latter is the amount which the commission undertook to justify to the House subcommittee.

"This justification . . . is almost attempting to justify suicide," Commissioner Splawn said.

Meanwhile, Commissioner Aitchison had warned that in his opinion valuation was coming to the fore as an issue in rate cases; and it was a mistake to turn valuation work into "a matter of statistics." He recalled that "when we previously tried short-cut methods, we were reversed on them."

Continuing, Mr. Aitchison said the railroads are contending that their cost of reproduction would be $60 billion as compared with a commission valuation of about $23 billion. The commission "ought to have means to support" the latter figure, he asserted. He went on to note that "the whole general basis" of the commission's valuation and "the adequacy of the work" had been attacked in the Ex Parte 175 rate case by the chairman of the railroads' valuation committee—H. T. Bradley, valuation engineer of the Missouri Pacific.

Recalling his own experience as counsel for state commissions in the early valuation cases, Mr. Aitchison made this further comment: "These valuation cases were hotly contested law suits, and they will be again when the question of valuation again becomes important. It will be menacing if we get some court decisions which throw the emphasis back where the Supreme Court placed it in the O'Fallon case."

Broader Powers Proposed For L. I. Transit Authority

Broader powers for the Long Island Transit Authority to effect reorganization of the Long Island Rail Road were proposed on March 5 by Governor Thomas E. Dewey in a special message to the New York State Legislature. Legislation to carry out the proposals of the governor's message and to give the authority the additional power which it had itself requested, was introduced in the legislature on the same day.

The legislation, the governor's message explained, "contemplates that the authority file a plan of reorganization under Section 77 of the National Bankruptcy Act to acquire the railroad property. While such proceedings are pending the authority would continue its efforts to achieve a satisfactory private operation agreement. If such a private reorganization is not attainable, operation of the road by the authority through a controlled corporation would be possible until such time as a transfer to private operation becomes feasible."

The message and the accompanying legislation were based in large part on the authority's statement that "a major obstacle" to finding a private operator for the line has been the authority's inability to deliver title to the road or even to fix a price a prospective purchaser might have to pay. The authority has previously called "illegal" a reorganization plan proposed by the Pennsylvania, owner and principal creditor of the Long Island (*Railway Age*, November 26, 1951, page 58, December 10, 1951, page 56, and January 7, page 12).

Governor Dewey's message does not mean any "immediate change" in "control or management" of the Long Island, its trustee, William Wyer, said in a special message to employees posted on company bulletin boards on March 5.

Senate Committee Ends St. Lawrence Hearings

The Senate Committee on Foreign Relations concluded on February 29 its latest series of hearings on the pending resolution to approve the United States-Canada agreement for construction of the proposed St. Lawrence seaway and power project. No meeting of the committee for reconsideration of the resolution in the light of evidence adduced at the hearing had been scheduled when this issue went to press.

Among witnesses opposing the seaway at the hearing's closing sessions were representatives of railroad labor organizations and the coal industry; J. M. Hood, president of the American Short Line Railroad Association; and two officers of the Association of American Railroads—Walter J. Kelly, vice-president in charge of the Traffic Department, and Caleb R. Megee, vice-chairman of the Car Service Division.

Mr. Kelly charged that the seaway's proponents have erred "both in underestimating the cost and exaggerating the traffic potential" of the proposed project in order to justify its construction. The A.A.R. vice-president found that there is "no reasonable possibility" that the seaway could be made self-liquidating by the imposition of tolls.

Addressing himself to contentions that the seaway is needed to haul iron ore mined in Labrador to furnaces in the Great Lakes region, Mr. Megee asserted that all of the Labrador ore could be moved by the railroads from east-coast ports and Montreal. The anticipated annual production is 10,000,000 tons, and the railroads are physically capable of handling that output, "or more," Mr. Megee added. He explained that this is true because the large number of hopper and other coal-carrying cars emptied at New York, Philadelphia, Baltimore and Montreal could be loaded with iron ore for return movement to steel centers. And he also noted that developers of the Labrador deposits plan to go ahead with their project whether or not the waterway is built.

Presentations in favor of the project included that of Secretary of Commerce Sawyer who noted Canada's announced plans for building a seaway alone if Congress fails to approve the joint undertaking. Since the United States is confronted with that situation, Mr. Sawyer does not believe the nation can afford to miss "this final opportunity . . . to make this good investment in our national security and our future industrial strength. . . ."

The secretary had figures which gave him "every reason to feel confident that ample traffic will develop over this waterway within a reasonable period." He also saw "every indication that a moderate schedule of tolls, such as can be negotiated with Canada without difficulty, will more than support the project."

The government-corporation idea for financing the seaway and power project has now been proposed by a group of senators who are supporting the project. The proposal was embodied in a resolution introduced in the Senate by Senator Aiken, Republican of Vermont, for himself and nine other senators. It contemplates creation of a St. Lawrence Development Corporation which would issue stock to be subscribed by the government and bonds, notes, or other obligations, which would be guaranteed fully and unconditionally by the government.

Car Owners Will Vote On $2 Per Diem Proposal

Railroad subscribers to Car Service Rules administered by the Car Service Division, Association of American Railroads, will vote on a proposal to increase the per diem rate for renting freight cars from $1.75 to $2.

The proposal was made by the general committee of the A. A. R.'s Operating-Transportation Division, and decision to submit it to the car owners was made by the A. A. R. board of directors at its February 29 meeting in Washington, D. C. The vote, by letter ballot, will be on the basis of the number of cars owned.

C.A.B. Cancels New Coach Fares Filed by Air Lines

Because "off-peak" air coach fares were not reduced to four cents per passenger mile, or higher seating capacity prescribed for day coaches, the Civil Aeronautics Board has suspended tariffs extending air coach service beyond the present March 31 expiration date.

There is little chance any air coach service will be discontinued. At least one of the air lines already has indicated it will meet the four-cent fare requirement. The board said it hoped the others would also "promptly revise their filings to conform to the coach policy."

FOREIGN FREIGHT AGENTS and other freight traffic officers of the Canadian National met in Montreal recently to discuss export and import traffic operations. Those attending were, left to right, front row, H. J. Sneath, foreign freight agent, Montreal; L. Fonger, freight traffic manager, Winnipeg; John Pullen, system vice-president, traffic, Montreal; W. A. Watson, foreign freight agent, Toronto, who presided; and F. W. Carmichael, foreign freight agent, Vancouver; back row, left to right, B. H. Thome, foreign freight agent, New York; H. W. Craig, assistant to vice-president, Montreal; B. J. Roden, chief clerk, foreign freight, Montreal; J. R. Brown, assistant foreign freight agent, Montreal; W. Hindle, assistant foreign freight agent, Montreal; H. L. Lapoint, Montreal, representing assistant vice-president traffic, Canadian lines; O. T. Bailey, assistant foreign freight agent, Montreal; and Brian French and George Doiron, secretaries.

The tariffs were filed by six of the major air lines. The board said it cancelled the filings only because they failed to comply with the announced policy on coach service—i. e., the provision of economically sound service at reasonable rates.

All the air lines proposed fares of more than four cents a mile for "off-peak" (night) coaches, the C.A.B. said. Northwest Air Lines also failed to specify a high enough seating capacity as required for economically sound air coach operation, the board added.

New Group Will Advise Sawyer on Transportation

Formation of a council to advise the Secretary of Commerce on general transportation matters was approved during a February 28 meeting of carrier and shipper representatives in Washington, D. C.

About 25 transportation executives met at the invitation of Commerce Secretary Sawyer. The names of those attending this "informal" meeting were not revealed by the department. Instead, the "exploratory" nature of the session was emphasized. Meanwhile it was learned that President William T. Faricy of the Association of American Railroads, was among those present.

First formal meeting of the new council will be held April 29. By-laws and membership of the group will be determined at that time, the department reported.

The new group will advise the Commerce Department on transportation matters outside the regulatory field. Among those present when the council idea was approved were representatives of air, rail, highway, ocean, inland waterways, shippers, pipeline and freight forwarder segments of the industry, the department announced.

Diversion of Short-Haul Mail to Trucks Continues

During the current fiscal year, which ends June 30, the Post Office will have established 380 truck routes for handling short-haul mail, and it contemplates that 480 more routes will be established in the 1953 fiscal year.

This was revealed in statements made recently to a House appropriations subcommittee which is considering proposed fiscal 1953 appropriations for the department. They were made by C. N. Bruce, director of budget and planning for the department.

The proposed appropriation contemplates that payments for truck transportation of mail in fiscal 1953 will be $10.4 million above those of the current fiscal year, and that $6.1 million of the increase will be for short-haul truck service. "The savings with respect to railroad transportation that will be supplanted by these short-haul trucks will be considerably greater than the additional cost for this service," Mr. Bruce said.

I.C.C. Studies Railroad Plea for Increased Rates

The Interstate Commerce Commission last week began its study of whether railroads should be allowed a further increase in freight rates. Oral argument in Ex Parte No. 175 concluded late February 29, after some 30 hours.

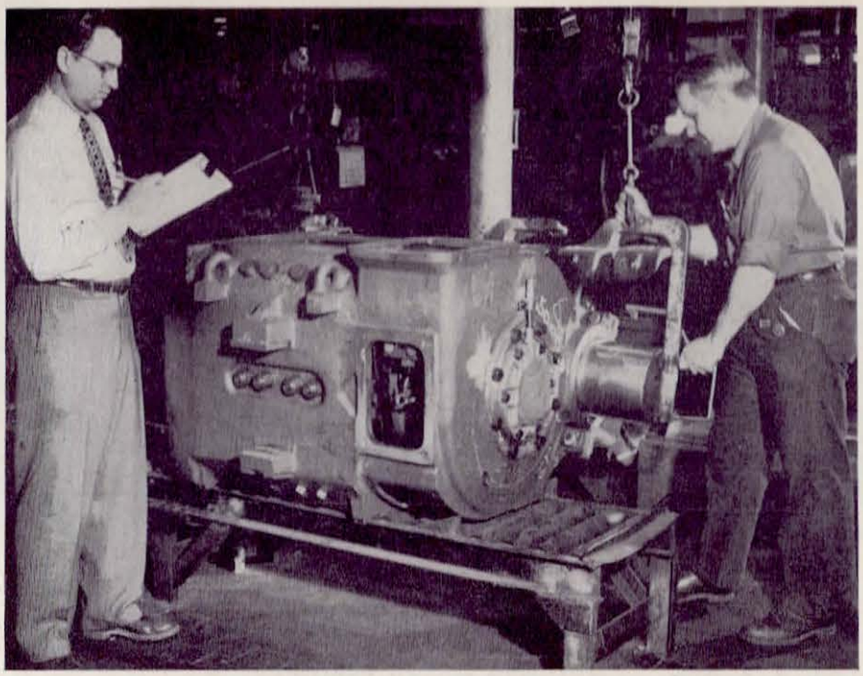
Rail carriers are asking the commission for authority to increase their rates to the full 15 per cent requested back in March 1951. Giving effect to hold-downs, this would be about 7.6 per cent over existing rates, since the commission authorized a 6.6 per cent boost last August.

Throughout most of the week of argument the commission heard representatives of various shipper groups

T.&P. GETS GOOD RESPONSE TO "FREEDOMS" ADS

Since the Texas & Pacific inaugurated its "Four Pillars of Freedom" advertising campaign in May 1951, some 600,000 copies of the booklet bearing that title and 200,000 reprints of the advertisements have been distributed in response to approximately 25,000 letters from people in all walks of life, and living in all parts of the United States and Canada. One editorial regarding the campaign has been used in more than 400 newspapers, while several hundred additional newspapers and other publications have commented editorially upon the campaign or reproduced in whole or in part the article written by T. & P. President W. G. Vollmer, on which the campaign is based.

The campaign itself was described in *Railway Age* July 23, 1951, page 52, while the fact that it won for the T. & P. a special award from the American Public Relations Association was reported in the issues of November 26, 1951, page 18, and December 24, page 13.



ELECTRO-MOTIVE'S 50,000TH TRACTION MOTOR recently rolled off the company's assembly line at LaGrange, Ill. The motor's earliest ancestor was built in 1938, yet either may be placed in any E.-M.D. diesel locomotive built then or now. Since 1938, Electro-Motive has boosted the horsepower output (in passenger service) per motor from 450 to 560 and lengthened overhaul period from 200,000 miles to 300,000 miles. Some roads have been experimenting with mileages as high as 500,000. N. C. Dezendorf, general manager of E.-M.D., attributes the higher ratings in part to use of inorganic materials for insulation.

argue against a further rate increase. Among these were fruit and vegetable growers, grain shippers, livestock, coal, wood products, metals and ores and other interests.

E. H. Burgess, vice-president and general counsel of the Baltimore & Ohio, and general counsel for the roads in the rate case, made the final plea for the carriers. As noted in *Railway Age* of March 3, page 12, Mr. Burgess said a "great majority" of the nation's railroads are faced with a confiscatory rate level unless they obtain a rate increase.

William L. Grubbs, general counsel of the Louisville & Nashville, Harry C. Barron, counsel for the Western carriers, and Edward A. Kaier, general attorney of the Pennsylvania, bolstered the railroad argument with presentations for roads in the South, West and East, respectively.

Freight Car Loadings

Loadings of revenue freight in the week ended March 1 totaled 755,624 cars, the Association of American Railroads announced on March 6. This was an increase of 72,256 cars, or 10.6 per cent, compared with the previous week (which included the Washington's birthday holiday); a decrease of 30,237 cars, or 3.8 per cent, compared with the corresponding week last year; and an increase of 181,175 cars, or 31.5 per cent, compared with the equivalent 1950 week.

Loadings of revenue freight for the week ended February 23 totaled 683,368 cars; the summary for that week, compiled by the Car Service Division, A.A.R., follows:

REVENUE FREIGHT CAR LOADINGS

For the week ended Saturday, February 23

District	1952	1951	1950
Eastern	123,118	134,575	100,574
Allegheny	141,262	150,924	108,675
Pocahontas	58,009	58,464	21,485
Southern	129,397	133,275	107,146
Northwestern	66,391	78,864	65,595
Central Western	110,981	119,448	91,182
Southwestern	54,210	59,295	52,050
Total Western Districts	231,582	257,607	208,827
Total All Roads	683,368	734,845	546,707
Commodities:			
Grain and grain products	43,298	48,278	39,125
Livestock	7,498	6,552	7,168
Coal	140,596	139,180	51,980
Coke	16,117	16,116	9,643
Forest products	40,652	45,839	37,641
Ore	19,263	21,625	9,146
Merchandise l.c.l.	66,218	79,018	72,587
Miscellaneous	349,726	378,237	319,417
February 23	683,368	734,845	546,707
February 16	737,609	740,557	560,068
February 9	733,724	573,209	568,816
February 2	731,006	651,165	612,060
January 26	727,933	784,166	635,934
Cumulative total 8 weeks	5,714,026	5,709,134	4,678,448

In Canada.—Carloadings for the seven-day period ended February 21 totaled 71,739 cars, compared with 75,847 cars for the previous seven-day period, according to the Dominion Bureau of Statistics.

	Revenue Cars Loaded	Total Cars Rec'd from Connections
Totals for Canada:		
February 21, 1952	71,739	38,100
Cumulative Totals		
February 21, 1952	558,311	270,096

Truckers Hauling Munitions Form National Conference

Organization of a Munitions Carriers Conference for national affiliation with American Trucking Associations was announced in an A.T.A. press release February 29. The organization was established "by representatives of more than 30 motor freight companies whose operations in many cases serve mostly the Defense Establishment and other government agencies," the release explained.

"Objectives of the new organization," it added, "include assisting authorities to codify and improve pertinent regulations, to advance research into freight handling methods and equipment, and to cooperate with governmental agencies in improving service to them."

P.R.R. Sued by O.P.S.

Acting for the Office of Price Administration, the Department of Justice has filed in federal court at Philadelphia, Pa., a complaint against the Pennsylvania. The complaint alleges the railroad has violated O.P.S. regulations by increasing prices for using private toilets and wash-room facilities at stations in 35 cities.

Treble damages of $335,245 are sought, along with an injunction to prevent continuance of the alleged violations. An O.P.S. statement commenting on the complaint said "these overcharges have continued despite numerous warnings which included an O.P.S. opinion that the services were not exempt from price control, and an order denying the railroad's application for an adjustment."

Ban Imports of Canadian Animals and Products

Imports of Canadian ruminants or swine, and products thereof, have been prohibited by the Department of Agriculture's Bureau of Animal Industry on the basis of its determination that foot-and-mouth disease exists in Canada. When such a determination is made, the prohibition is required by law.

MORE NEWS ON PAGE 90

Additional general news appears on page 90, preceded by regular news departments, which begin on the following pages:

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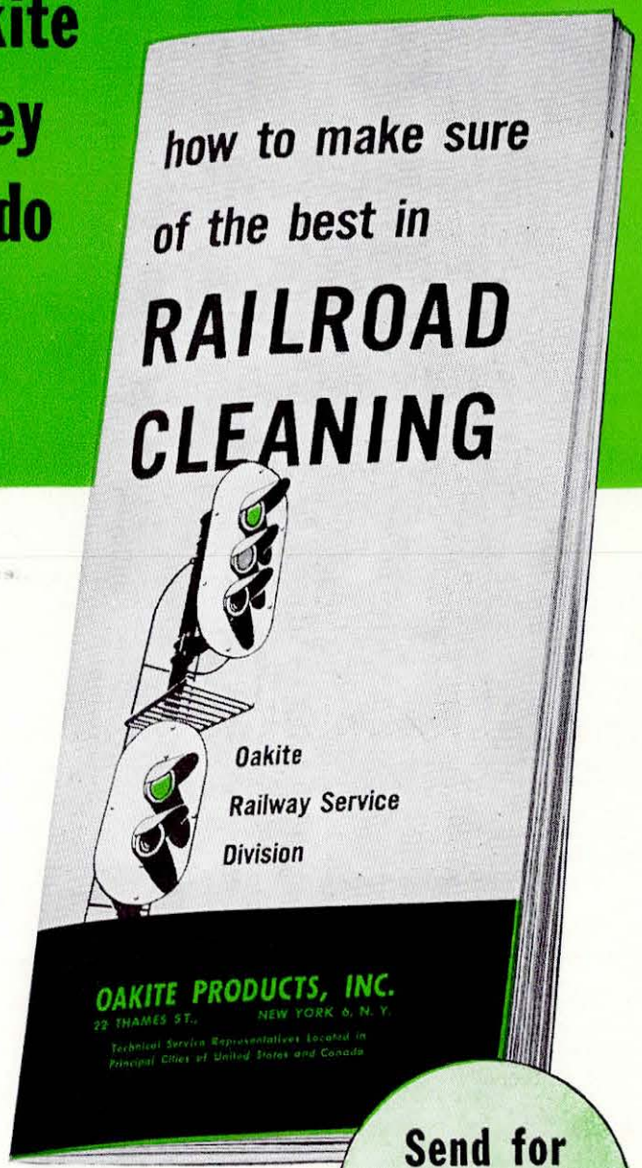
Just ONE IDEA lifted from this NEW 56 page Oakite booklet can save money for your road . . . help do some maintenance job easier, faster, better



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A big "little railroad" in the mighty Pacific Northwest knows the advantages of diesel-electric motive power. When the Spokane, Portland and Seattle first purchased two ALCO-GE switchers in 1946, all traffic on this road was hauled by steamers. Today a fleet of 83 modern diesel-electrics handles just over 75% of all freight traffic. Here's what dieselization has done for the SP&S Railway Company.

Average freight train speeds increased 9.6 mph.
Cost per 1000 gross ton miles 35¢ *less* with diesel-electrics.
Gross tonnage hauled increased on the average of 15%.

Helping the SP&S Railway Company provide top service to shippers are 68 powerful ALCO-GE locomotive units — the largest number of any builder on this road. Consistently given the tough assignments, these dependable units are playing an important part in this spirited railroad's bid to win more tonnage to the rails.

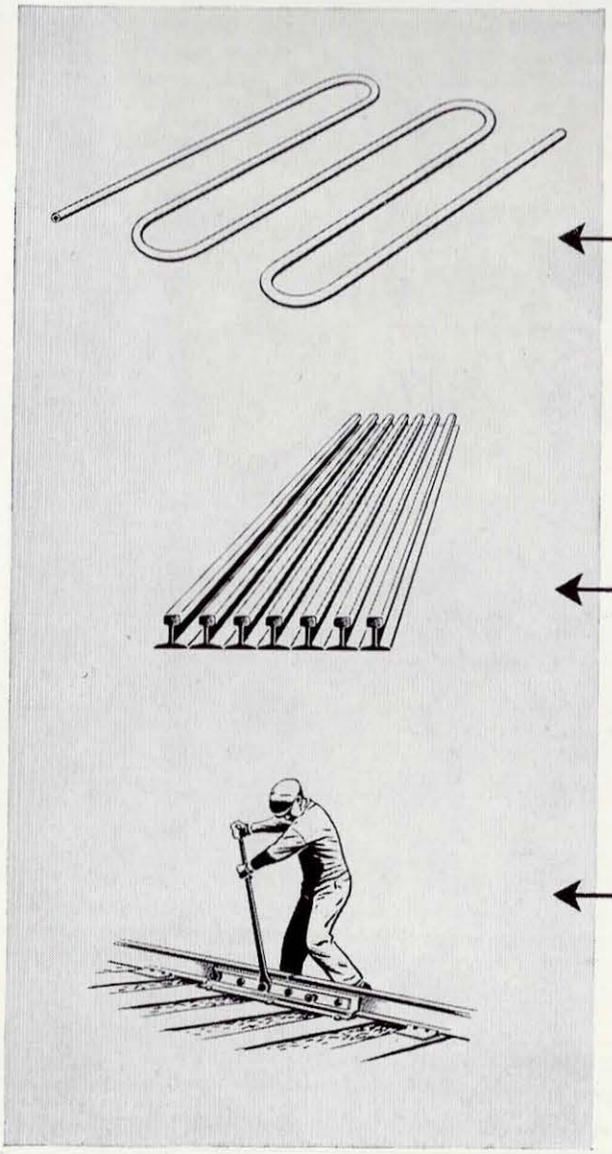
Alco GE

AMERICAN LOCOMOTIVE
and
GENERAL ELECTRIC

113-257

"RIBBONRAIL"

Saves these Critical Railroad Needs...



COPPER

Signal bonds of average size weigh 2½ ounces. In a mile of RIBBONRAIL track you save 30 pounds of scarce, costly copper — enough copper to make 147 ft. of ½ in. standard copper tubing. When you use continuous rail you also save copper in the future because there are no bond renewals in RIBBONRAIL.

STEEL

With every mile of track laid with RIBBONRAIL you make a net saving of from 12 to 16 tons of steel — enough steel to lay more than 300 ft. of track with RIBBONRAIL. And in the future you save more steel because with RIBBONRAIL no standard lengths are removed because of battered rail ends. Put essential steel to use in rail — not in joint fastenings.

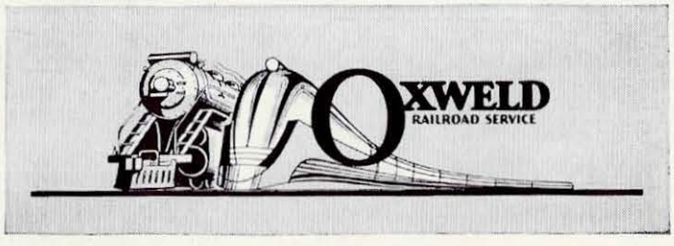
MANPOWER

RIBBONRAIL is easily installed with few men. And it eliminates joint bar maintenance — there are no fastenings to tighten and replace, no joint lubricant to apply, and no battered rail ends to build up. All these major manpower users are eliminated. Use your valuable manpower for other operations.

As a chief engineer or other railroad executive you cannot ignore savings that come with RIBBONRAIL.

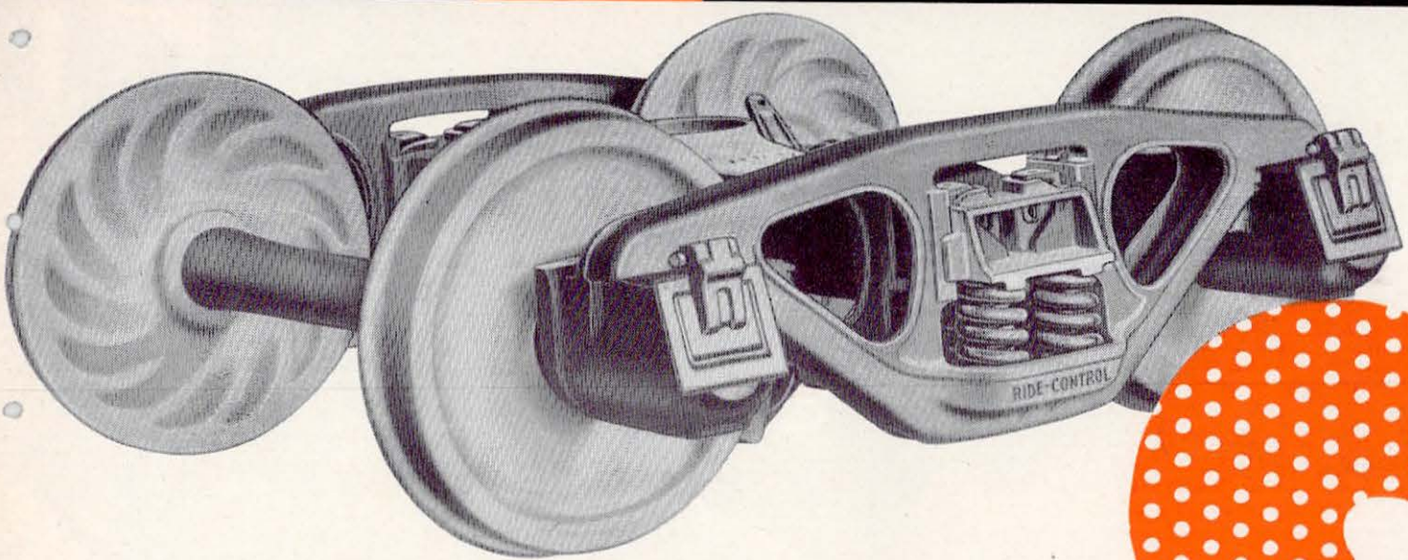
The term "Ribbonrail" is a service-mark of Union Carbide and Carbon Corporation.

OXWELD RAILROAD SERVICE COMPANY
A Division of Union Carbide and Carbon Corporation
UCC
Carbide and Carbon Building Chicago and New York
In Canada:
Canadian Railroad Service Company, Limited, Toronto



SINCE 1912—THE COMPLETE OXY-ACETYLENE SERVICE FOR AMERICAN RAILROADS

A DESIGNED...DEVELOPED and PROVED by American Steel Foundries



With pardonable pride we remind railroaders that ASF was responsible for the development of the Ride-Control freight car truck. Its achievements in the field have been very gratifying during these last eight years.

Today, almost 300,000 car sets of ASF Ride-Control Trucks are in operation. These trucks are delivering smoother, load-protecting, road-protecting rides in a wide variety of regular and high-speed freight train and box-express services. What are the reasons for such acceptance?

The Ride-Control Truck brought to railroading two great, necessary improvements: 1) It allowed the use of long-travel springs that give soft, impact-absorbing protection to lading. Even when a car is carrying its maximum permissible rail load, there is enough *reserve* spring travel to meet the needs of modern high-speed operation. 2) It provided proper and *constant* spring-action control to prevent harmful oscillation.

Engineeringwise, greatest of all accomplishments is the *utter simplicity* of the four little friction shoes which provide that control!

If you would like to know just how the Ride-Control Truck functions, please write for our booklet, "Quick Facts II." It's yours for the asking!

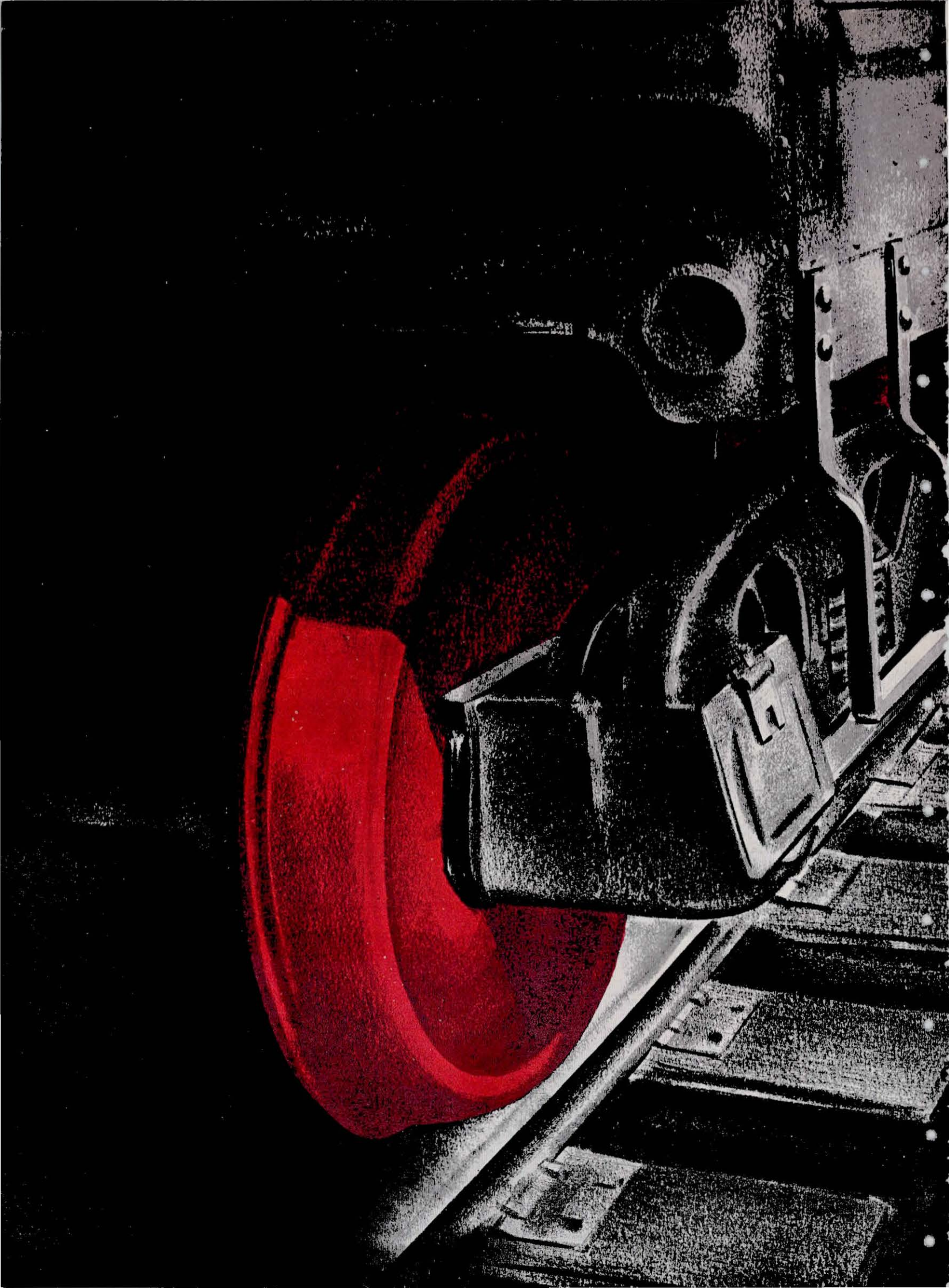
AMERICAN STEEL FOUNDRIES

410 N. Michigan Avenue, Chicago 11, Illinois

Mint Mark of ○ *Fine Products*

Canadian Sales: International Equipment Co., Ltd., Montreal 1, Quebec

F Ride-Control Trucks



The "Big Wheel"

This wheel moves more than
a freight car.
When this wheel stops,
America stops;
everything that flies and floats
stops.

Griffin Wheel Company, the world's
largest manufacturer
of freight car wheels,
has been supplying the railroads
for 75 years!

Griffin

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WHEEL COMPANY 410 N. MICHIGAN AVE., CHICAGO 11, ILLINOIS

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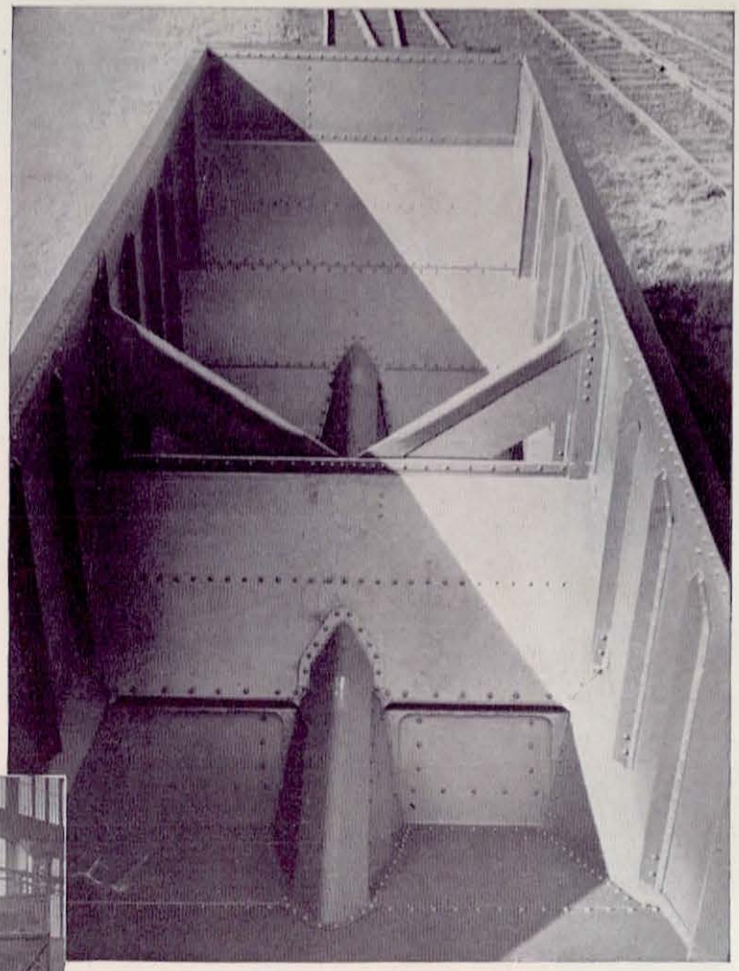
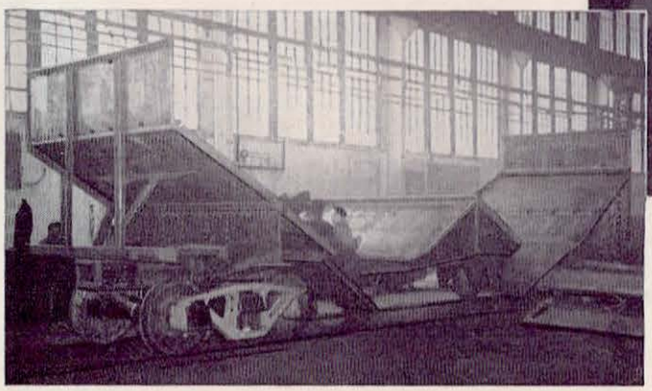
Member ASSOCIATION OF MANUFACTURERS OF CHILLED CAR WHEELS

Listen to the RAILROAD HOUR: ABC Network, Monday Nights

Take Advantage of MAYARI R

Save Steel ... Reduce Deadweight





You can benefit two ways when you build light-weight freight cars with low-alloy, high-strength steel.

First, you can save up to 6 tons of steel in a single car. This releases much-needed steel for additional cars or other essential equipment.

Second, you can eliminate much of the surplus deadweight ordinarily found in cars built of plain carbon steel. Increased payloads can be carried without exceeding the allowable axle limits.

Mayari R has the superior mechanical properties that make light-weight construction possible. It also has the added resistance to atmospheric corrosion that makes this type of construction practicable.

The *yield-point,* for example, is 50,000 psi—about twice that of plain carbon grades. It has an *endurance limit* of 50,000 psi, considerably higher than that for carbon steel—important where vibration or repeated loadings and unloadings occur. Its *atmospheric corrosion-resistance* is 5 to 6 times that of carbon steel—this reduces the damage from corrosion that might be expected where lighter gages are used.

Check the properties of Mayari R vs carbon steel point by point, then consider the advantages from every possible angle. You will see that this low-alloy, high-strength steel is well worth the added cost.

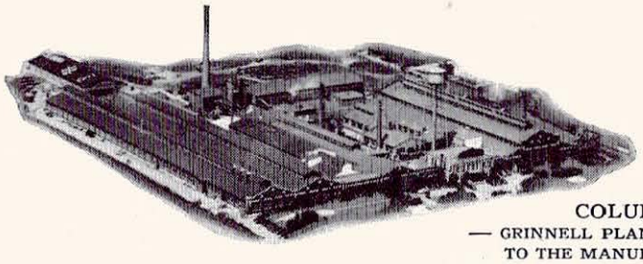
Our Catalog 259 gives complete information on the use of Mayari R in railway equipment. Keep a copy on your desk. Write or phone today.

BETHLEHEM STEEL COMPANY
BETHLEHEM, PA.

On the Pacific Coast Bethlehem products are sold by Bethlehem Pacific Coast Steel Corporation. Export Distributor: Bethlehem Steel Export Corporation

BETHLEHEM STEEL

Mayari R *makes it lighter... stronger... longer lasting*

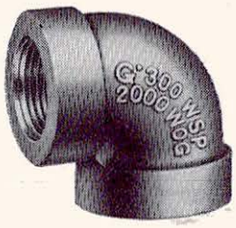


COLUMBIA, PA.
— GRINNELL PLANT DEVOTED TO THE MANUFACTURE OF AAR EXTRA HEAVY PIPE FITTINGS.

GRINNELL

manufacturer of a complete line of high quality

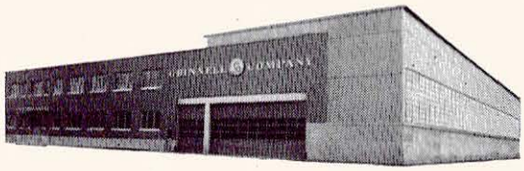
AAR EXTRA HEAVY PIPE FITTINGS



offers you...

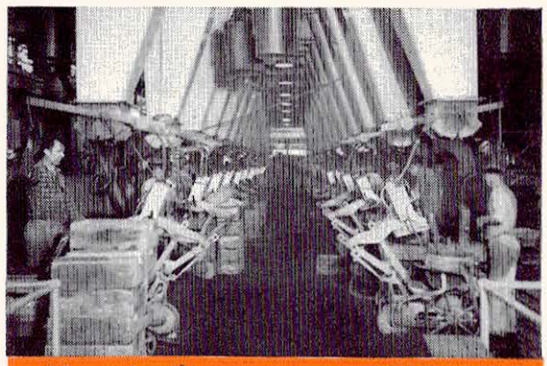
- **High Quality** . . . Grinnell 300 lb. AAR malleable iron fittings are made in conformity to the specifications and recommended practice for the Association of American Railroads.
- **Large Stocks** . . . Grinnell AAR fittings are mass-produced by skilled workers using modern equipment.
- **Dependability** . . . the result of the finest materials, equipment and methods; assured by exacting production control and triple inspection.
- **Coast-to-coast Distribution** . . . A network of branch warehouses and distributors makes available local stocks of Grinnell pipe fittings.

WHENEVER YOU ORDER PIPE FITTINGS,
CALL YOUR NEARBY GRINNELL WAREHOUSE OR DISTRIBUTOR



ONE OF 30 GRINNELL BRANCH WAREHOUSES

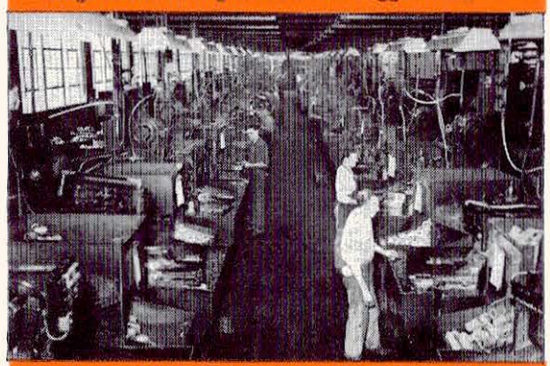
GRINNELL
WHENEVER PIPING IS INVOLVED



Dimensional accuracy assured by finest equipment and modern methods of mechanized molding.

Smooth inside finish obtained by the use of the best core sand and the employment of superior core making equipment.

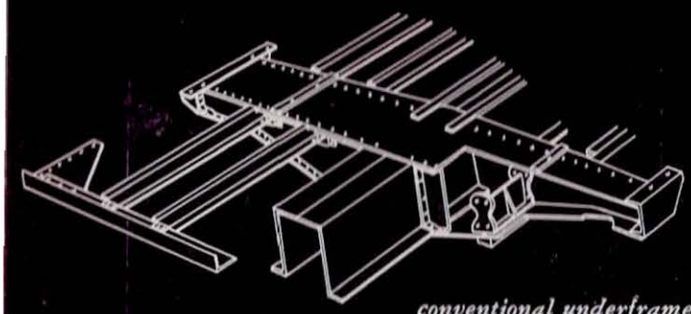
Superior metal, poured into molds on continuous conveyors, gives Grinnell pipe fittings extra strength . . . extra ruggedness.



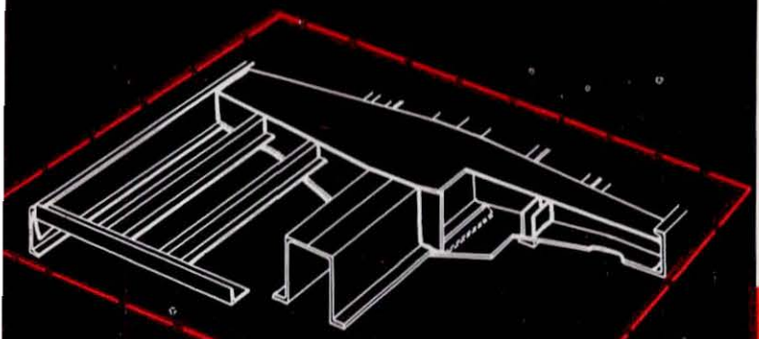
Accurate chamfer and precision threads, produced by modern tapping machines, provide easy starting and tight joints.

Grinnell Company, Inc., Providence, Rhode Island • Coast-to-Coast Network of Branch Warehouses and Distributors

pipe and tube fittings • welding fittings • engineered pipe hangers and supports • Thermolier unit heaters • valves Grinnell-Saunders diaphragm valves • pipe • prefabricated piping • plumbing and heating specialties • water works supplies industrial supplies • Grinnell automatic sprinkler fire protection systems • Amco air conditioning systems



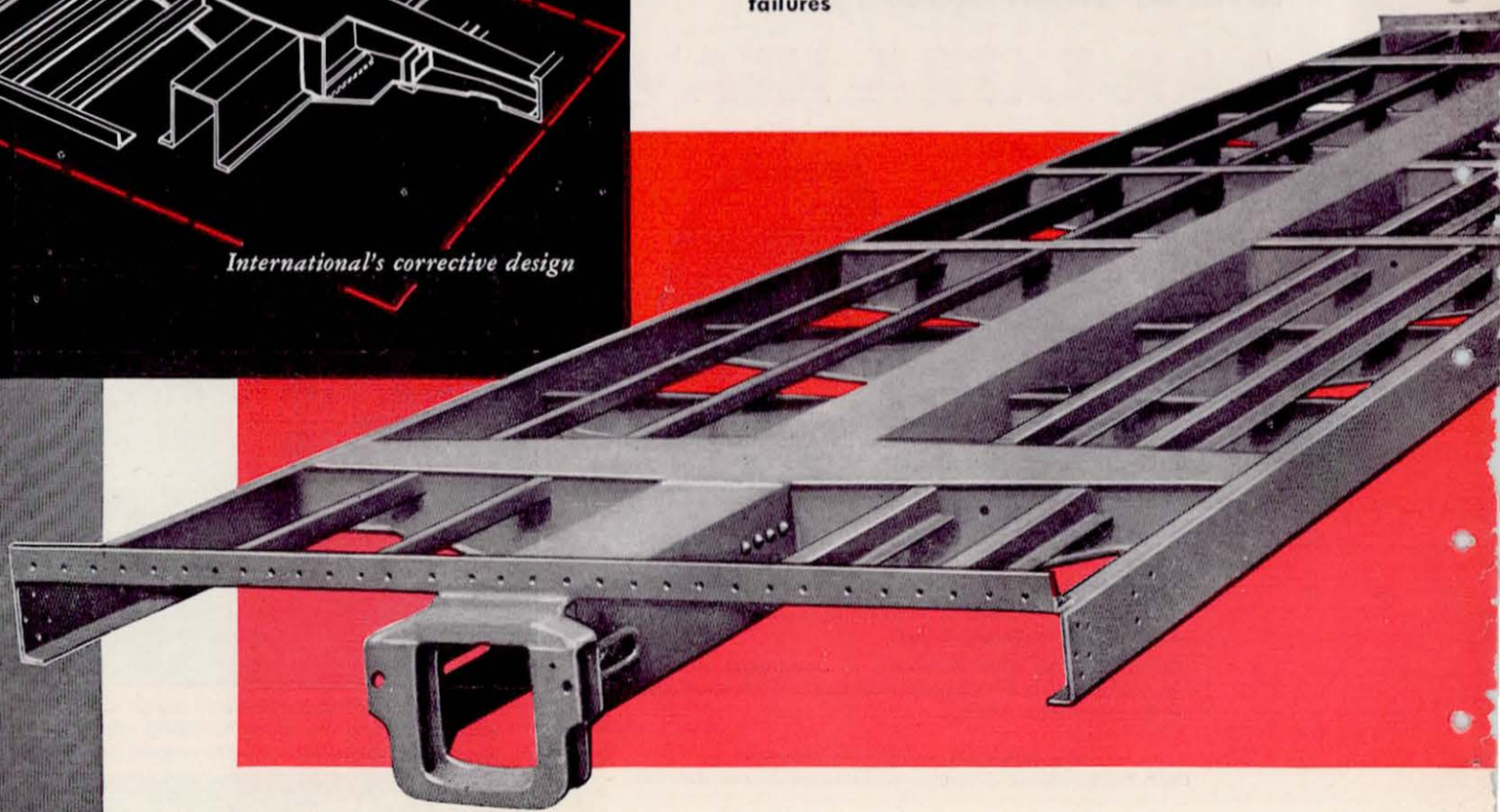
conventional underframe



International's corrective design

International's UNDERFRAMES

Research, *plus a new precision in construction,* meet the challenge of past structural failures

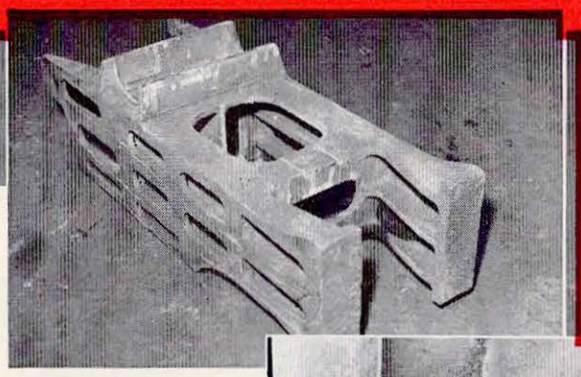


INTERNATIONAL'S **underframe design is predicated *first* upon years of research covering static and dynamic loads on car-body and lading resulting from forces of both acceleration and deceleration. A.A.R. committee findings were studied and the structural design was developed to meet and *exceed* requirements recommended by the Car Construction Committee in the 1950 report to the Annual Meeting.**

But *secondly*—and just as important—the developed features of the final construction are also predicated upon a new theory and a *new precision* in freight car manufacture; that the box car is a *unit*, and its *maximum* strength is dependent upon consideration of the underframe and *sides* as complementary—particularly as concerns the side sill components.

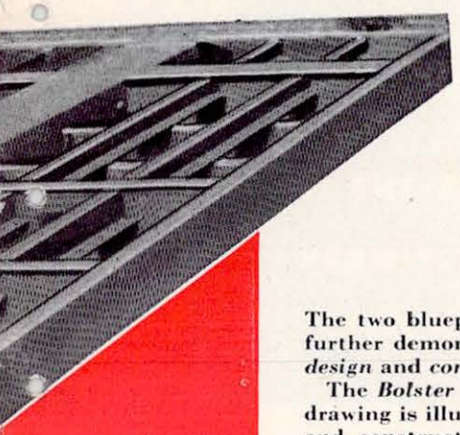
Therefore, though only underframe features are shown on these pages, for *maximum* strength, the two fabrications must be considered as integrated parts of the whole.

International



A high prevalence of center sill fracture and weld failure called for intensive study of these components. It was impressively realized that all of the static and dynamic forces are transmitted through the center plates and center filler. There is vast evidence of failure at these components. In the photograph at the right, the construction and design of *International's* center filler is shown. Now look at the *precision* application of this unit in the illustration below.

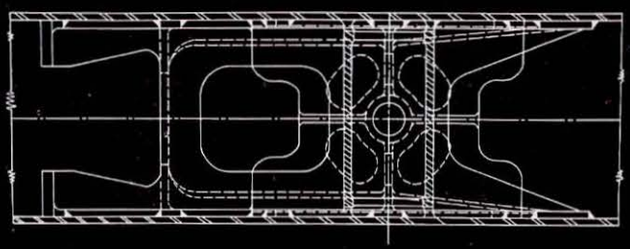
Though it is an inherent construction technique even in the least important components, here is *International's precision construction* excellently displayed. NOTE, PLEASE, that the bottom surface of the filler and center sill flanges are in an *exact* plane—and that *full section support* is accomplished at the "roof". *This is what we mean by precision construction. Such details are "production line"* accomplishments at International. The realization of the importance of such construction and the *ability to follow the proper application procedure and techniques* are problems which today confront conventional designers and builders.



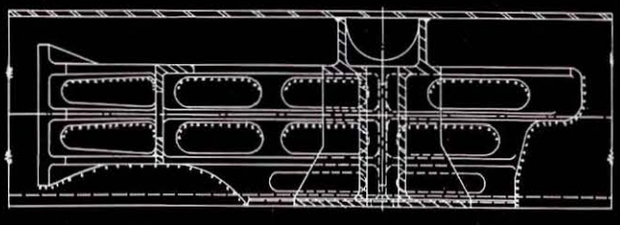
The two blueprint reductions shown at the right are further demonstrations of the combined resources of *design* and *construction*.

The *Bolster Center Filler and Rear Draft Gear Stop* drawing is illustrative of meticulous design dimension and construction technique—the application of the center filler to the center sill by welding. This is the component illustrated photographically above.

The *Underframe Comparison* drawings at the top of the opposite page clearly show a rectangular lateral "truss" formed by the body bolster, side sills, end sills and floor stringers (as shown by the red line)—rigidly integrated by welding. *This construction effectively meets the tendency of the center sill to "float" in relation to the body bolster.*



In *International's* corrective design note that *maximum utilization of material section in the tapered section as formed* is achieved. Note body bolster with continuous top and bottom cover plates, side-sill to side-sill, and with web plates set near the edges of cover plates. Note the box-section cross bearers of maximum depth; *the deeper floor stringers between cross bearers*; and the *rigid* vertical attachment of all floor stringers.

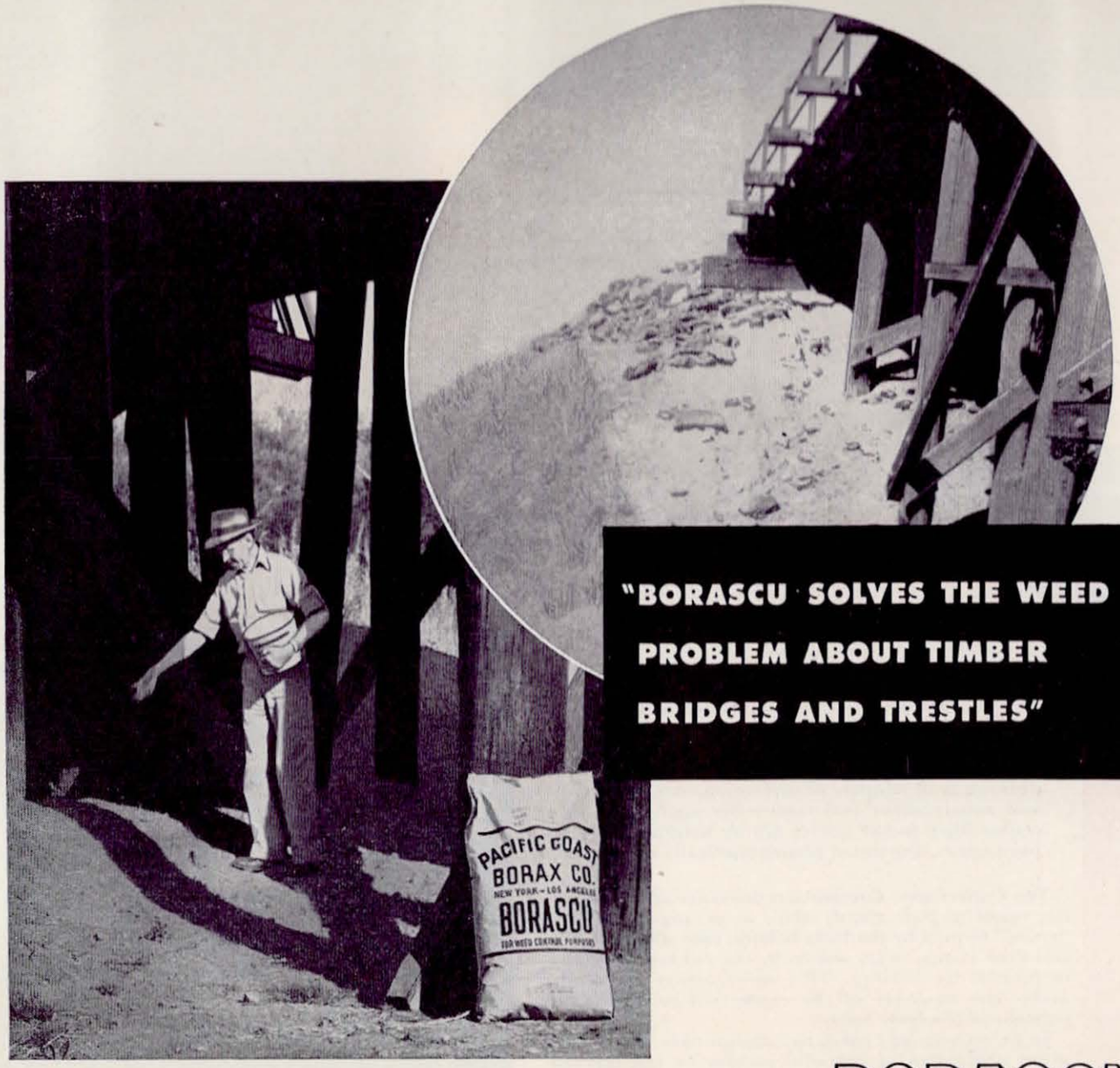


***44% of underframe failures involve the body bolster assembly and its attachment to the center sill.* This design is a *studied* response to the increasing imposition of high loads and unmeasured impacts incident to modern loading techniques, increasing weight and power of lift trucks, the necessary increase in retarder yard handling, etc.**

This is just one facet of International Steel's corrective design—the "NEW PRECISION IN FREIGHT CAR CONSTRUCTION".

Steel company

RAILWAY DIVISION Evansville 7 Indiana



"BORASCU SOLVES THE WEED PROBLEM ABOUT TIMBER BRIDGES AND TRESTLES"

Don't Waste Your Manpower on Weeds!...Switch to BORASCU® WEED KILLER

You are looking at a trestle area treated with Borascu Weed Killer about two years earlier . . . *but fire-hazardous vegetation couldn't come back!* Lasting results . . . important savings . . . that's why more than thirty railroads are using Borascu. You can see another reason, too; it is the ease and simplicity of application! Section hands do the work in short order; nothing to mix, no costly hauling of water nor tieing up tracks with expensive on-track equipment . . . just a man, a pail and Borascu applied dry . . . from easily disposable 100-lb. multi-wall paper sacks. Yes, here is an effective low-cost weed killer you may use safely about timber trestles, tie piles, and congested classification yards, with the utmost economy. Borascu is nonflammable, noncorrosive, to ferrous metals, nonpoisonous to livestock . . . yet it is capable of destroying nearly all forms of vegetation! See Borascu kill weeds on *your* road, under *your* conditions . . . ask us to demonstrate without any charge or obligation.

Weed Control Dept. Representatives located in:
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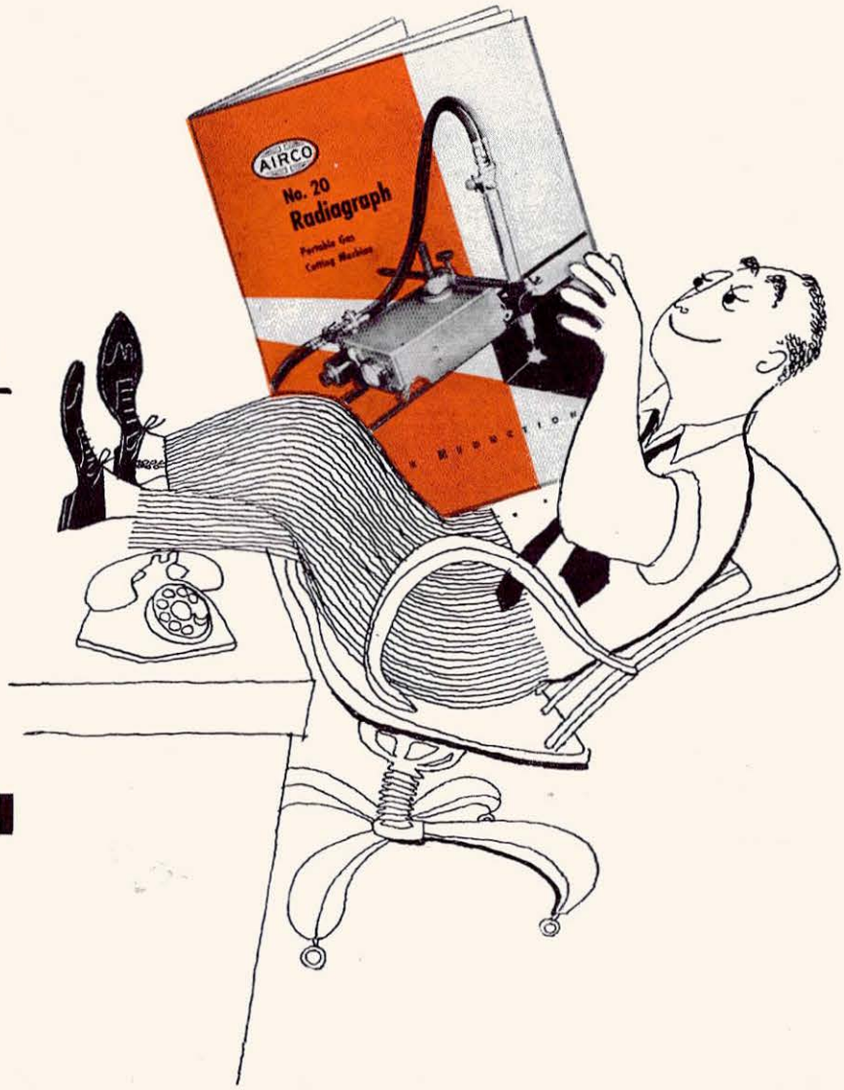
Read the facts about

AIRCO's NEW NO. 20 RADIAGRAPH



Up-to-the-minute in design, the No. 20 Radiagraph is Airco's newest service-proven portable gas cutting machine.

. . . So you'll know about the first gas-cutting machine designed to carry Aircomatic®, Heliwelding, Flame Hardening, and other *fabrication* equipment . . .

. . . So you'll be among the first to know how the No. 20 Radiagraph cuts circles and arcs, any length straight lines, simultaneous parallel lines — with single or double bevels, and irregular shapes.

. . . So you'll know how this 57-lb. one-man portable can be put to work for you, we've written up all the detailed information you need in a quick-reading, 8-page folder. To get your copy of the No. 20 Radiagraph catalog, please fill in the attached coupon and mail it to us today, or write us on your business letterhead.

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Just this one General Electric 70-ton diesel-electric locomotive actually showed more profit in 11 months than the *two* steamers it replaced could show in nine months of combined operation!

G-E 70-TONNER ATTRACTS NEW TRAFFIC FOR ATLANTIC AND WESTERN R. R.

Operating Revenues Jump $10,745.00, Costs Down $7,169.00 During First 11 Months of 1951

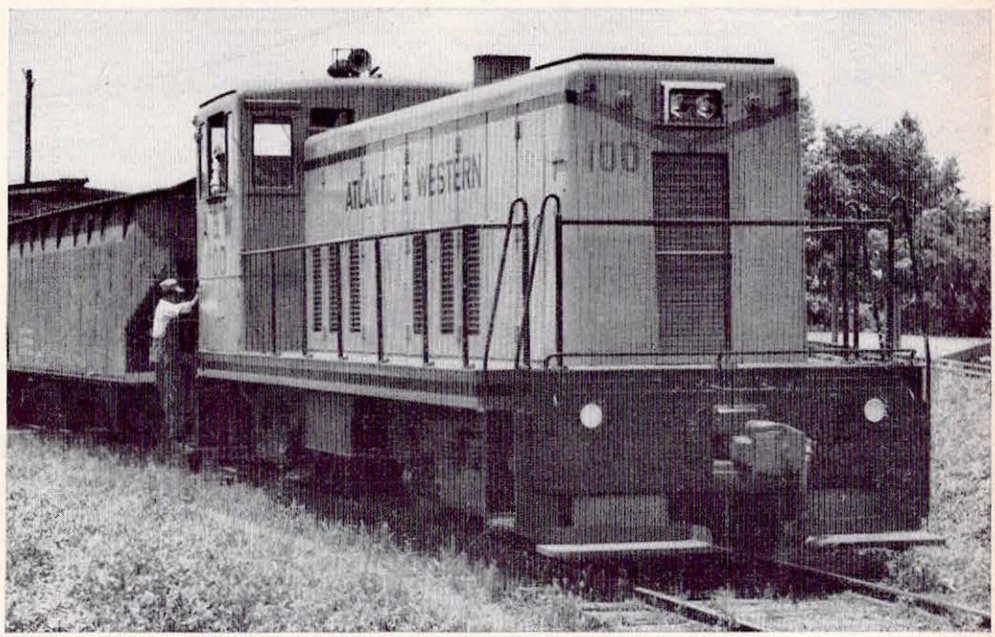
One General Electric 70-ton diesel-electric locomotive has helped boost operating revenues 11.3%, or $10,745.00, for the Atlantic & Western Railway, during the first 11 months of 1951. During the same period, operating expenses dropped $7,169.00.

The railroad, which connects with the Seaboard, Atlantic Coast Line, and Southern railroads at Sanford, N. C., and the Norfolk Southern at Lillington, N. C., reports that the one G-E 70-tonner handled more revenue-producing tonnage during an 11-month period than the *two* steamers it replaced could handle in nine months of combined operation.

"Since switching to diesel-electric operation," says Mr. E. T. Ussery, general manager, "many new customers have been added to our schedule, for they definitely feel that carriers using modern equipment can render more efficient service. Also, the sharp curves and sidetracks which gave us some trouble with the old steamers now can be negotiated with ease, due to the swivel truck construction of the 70-tonner."

The answer to your own motive-power problems, like those of a growing list of short-line railroads, may well be answered by the G-E 70-ton locomotive, or its companion unit, the 44-tonner. For detailed information or a survey of your needs, consult your nearest G-E sales office, *General Electric Company, Schenectady 5, N. Y.*

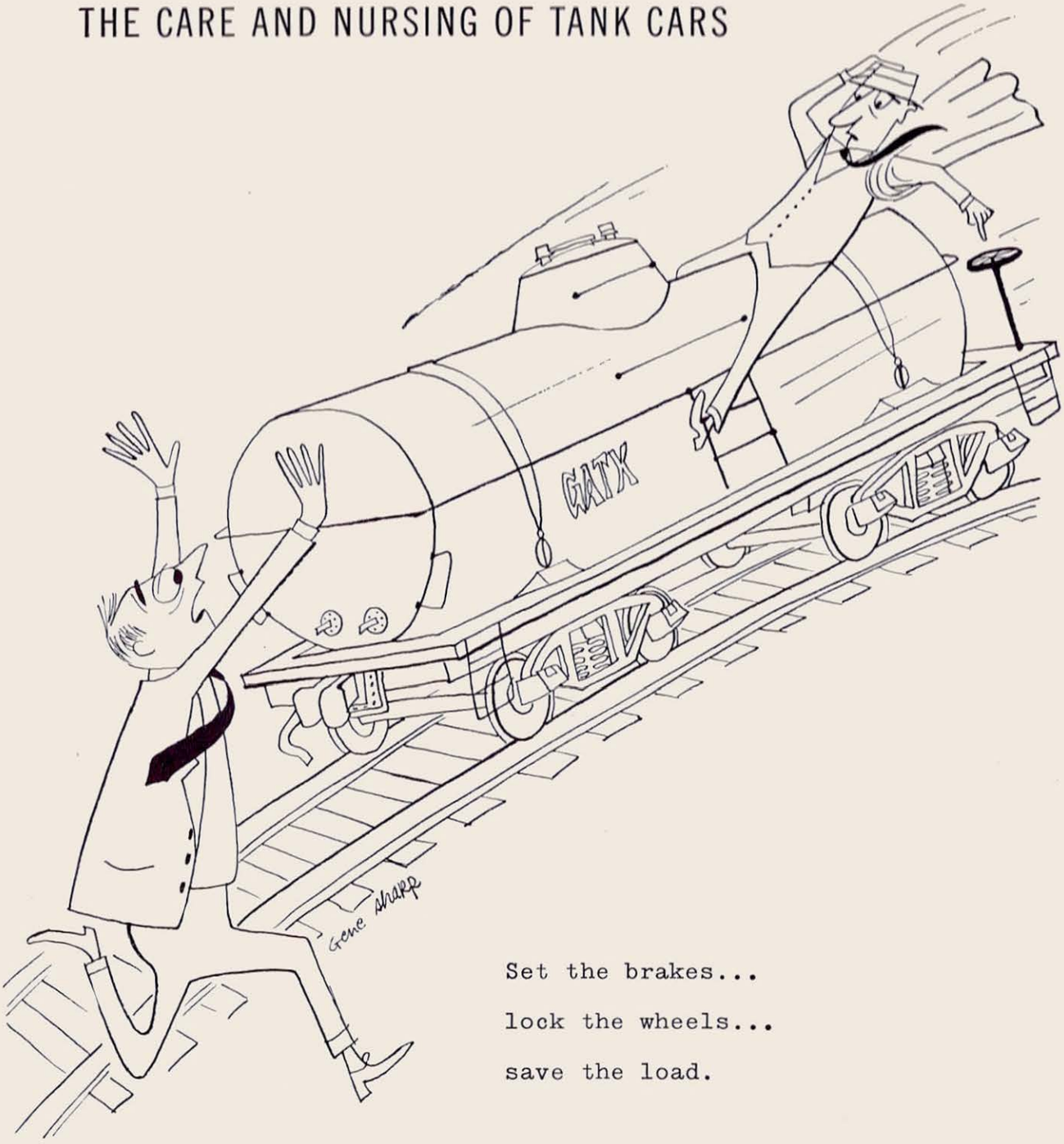
Fuel costs dropped sharply, along with other operating costs, when this G-E 70-tonner went to work for Atlantic and Western. During the first four months of 1951, the average fuel saving was $706.00 per month, while the average monthly saving during 11 months of the year was $650. Says Mr. E. T. Ussery, General Manager, "We're completely sold on diesel-electrics!"



GENERAL ELECTRIC

121-59

THE CARE AND NURSING OF TANK CARS



Set the brakes...

lock the wheels...

save the load.

Another way to get more from your GATX tank cars

GATX GENERAL AMERICAN TRADE MARK

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So many people have requested reprints of these cartoon advertisements that we are making them available to you for use in your shops. Just write us.

"BENCH MARKS AND YARDSTICKS"

Prior to World War I, in the days of wooden draft timbers, the writer of these lines recalls the reluctance of car department forces to replace broken draft bolts, if there seemed to be any hope that a car, bad-ordered for this cause, might make it to the next division point without breaking down. This reluctance stemmed wholly from the fact that the master mechanic's yardstick for measuring a car foreman's adequacy was the number of his "okays" in relation to man-hours.

The car foreman, with such a gage on him, was under strong temptation to simulate repairs which were too costly in man-hours to make thoroughly. The foreman couldn't act sensibly to protect the overall financial welfare of the railroad by requiring thorough work because, if he did so and reduced his okays-to-man-hours ratio, he knew he wouldn't hold his foremanship very long. Foremen, under such short-sighted managerial overseers, could not be expected to think of railroading in terms of making money for the stockholders or in giving service to customers. Instead, the foreman had to make maximum okays in relation to man-hours his principal, and indeed his only, goal. Such standards obviously made for bad railroading. Has the industry entirely rid itself of such standards?

A Widely Applicable Technique

In the engineering department, as everyone knows who has watched surveyors work, levels are run in relation to a fixed "bench mark" of carefully predetermined elevation above sea level. Lines of levels have meaning only as they are related to the bench mark, which is both a starting and a finishing point, and checks the correctness of a local survey and calculations at the end of an operation, as it provides a place to start from. Doesn't every railroad department, and every railroad job for that matter, need to have similar "bench marks" to which specialized efforts are subordinated and by which their aim is checked and kept true?

What kind of "bench mark" or "yardstick" do the directors set up for top management? Is it that of net earnings only? If so, management might produce what would look like net earnings by slighting maintenance or service or treating employees shabbily — thus, in reality, distributing the capital assets of the property camouflaged as net earnings. What standards do directors set for their own performance — that of serving the best interests of the company and the country, or is it some private concern that is uppermost in mind?

If pursued to its logical conclusion, this "bench mark" search would not terminate until it answered such questions as whether people live just to make as much money as they can, or whether there are other goals that should, at times, supersede the economic ones. George Washington — as the richly detailed biography by Douglas S. Freeman clearly brings out — was about as acquisitive of both wealth and "honor" as any American before or since. But a time came when he willingly and unswervingly for a period of years risked all his property and his life in defense of political principles. Was Washington foolish and impractical? Were his "bench marks" and "yardsticks" false? Answers to such questions cannot be avoided in any honest and thorough quest for standards by which human performance is to be gaged.

In the belief that some greater attention to the "bench mark" question throughout the railroad industry might be interesting and helpful, we are inaugurating herewith a serial discussion of "bench marks" and "yardsticks" by which departments and individuals are, or ought to be, gaged; and we invite the thoughts and observations of our readers on the subject, based on their practical experience. Do you believe the yardstick by which your own, or your department's, efficiency is gaged, is adequate and dependable — that is, does it accurately measure and foster the long-run welfare of the owners, customers and employees of your railroad and the railroad industry?

If you believe so, please write and tell us about this

bench mark so we may describe it for the benefit of the rest of the railroad industry. If you do not believe the bench mark used to gage your efficiency is fair or accurate, then write us and tell why you believe it is faulty and what better gage you believe should be used instead.

To the Advantage of All

Your views, based upon and illustrated by your own specific experience, should be both thought-provoking and valuable to other railroad men and to the welfare of the industry. Out of such a discussion might come a better set of "bench marks" throughout the railroad industry, for all departments and all occupations. Such improved bench marks could scarcely fail to work to the advantage of all concerned. Your confidences will, of course, be scrupulously observed. Please write the editor at 30 Church Street, New York 7.

Next week, under the heading "Bench Marks and Yardsticks — II" we will report the ideas of the vice-president of a large railroad on the problem of evaluating the performance of a passenger conductor and a traffic salesman.

A BRAND-NEW APPROACH TO PASSENGER CAR DESIGN?

The standardization of floor plans for several types of passenger cars covered in a recent American Railway Car Institute report is one of two approaches that can be taken to reduce the price of new passenger car equipment. Either the railroads can make the new passenger car more attractive in price and performance by building on established traditions a step at a time, or they can start anew, not from scratch but from a thorough engineering study complete with a detailed stress analysis of the entire car.

The first of these alternatives can be considered the conservative approach, the second the bold one. Perhaps the latter ought to get some consideration.

The present decision as to what to do in passenger car design is not too different from that which faced the operators of the old-fashioned street car some twenty years ago. To solve their mutual problems, the heads of the major street car systems got together and formed a group out of which grew what was termed the Presidents' Conference Committee. This group employed experts to work up specifications for an improved street car suitable for assembly-line production.

The success of this project was phenomenal. The streamline, lightweight, quiet, smooth riding and thoroughly modern street car that resulted from the efforts of this group was appropriately named the "P.C.C. car." It gave the street car a new lease on life.

In developing this vastly superior street car, the committee did not take an existing design and try to improve it part by part. They made a thorough engineering study of what could and should be done to turn out an improved street car at a reasonable price. The study culminated in a car which was as successful as it was radical. Studies of railroad passenger car design which have as an objective the standardization of floor plans and other details to reduce costs are certainly commendable, but mightn't the development of a completely new design based on a thorough engineering study also get some consideration?

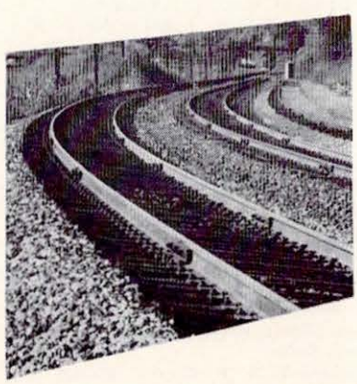
It would not be necessary for all roads to participate to make the sharing of the cost equitable. This could be done by again following "P.C.C." procedure. This organization developed the specifications for the car; it did not concern itself with manufacture. Established builders constructed the car on a bid basis. For each car built, the committee collects a nominal fee. Thus its work is self-sustaining.

Following a similar procedure, any such committee set up by a group of railroads could also be sustaining. If it were anywhere near as successful as its prototype, the P.C.C., it might take sufficient cost out of a passenger car to permit it to charge a reasonable fee and still save money for the builder and the buyer.

Other advantages might stem from such a thorough design study. Lighter weight should result from better stress distribution. This is desirable not only from an operating standpoint but, perhaps of greater importance, it would be an additional factor in reducing initial cost, as the cost per pound would not increase as it does when expensive lightweight materials are used. The chances should be good that a comprehensive study of design would reduce both pounds and cost per pound.

A better and smoother ride is another advantage that could be expected. This alone, though not the initial purpose of the study, would justify undertaking it. It is entirely possible that the improvement in the ride would turn out to be more important than the committee's initial purpose of lowering first cost. A good deal of business, in sleeping cars particularly, is going to the air lines today on runs well served by overnight sleepers. Why? The reason many people give is that they cannot sleep well on a train. This may seem foolish or downright ridiculous to those who can. But those who think a train ride is too rough for sleeping still won't ride trains until they get a smoother ride.

Of the objectives of economy and an easier ride only the reduction in initial price would be expected from studying standardization only. Both objectives can be attained by studies aimed either at piecemeal improvements to existing traditional concepts of design, or they can be attained by a completely new design. The example of the P.C.C. street car shows that the latter approach can accomplish far more. The former, or piecemeal approach is, of course, easier and cheaper. But doesn't the comprehensive approach at least merit consideration and discussion?



A.R.E.A. Program and Engineering Section

Activities scheduled to take place at Chicago this week will be outstanding in the business year of railway engineering and maintenance officers throughout the country. These activities will center around the annual convention of the American Railway Engineering Association at the Palmer House, and the huge exhibit at the Coliseum that is being sponsored by the National Railway Appliances Association. *Railway Age* recognizes the importance of this occasion by presenting in the following pages a detailed program of the convention, two illustrated articles especially chosen for their timeliness and interest to engineering officers, and descriptions of 42 new and improved machines, devices and materials that have been brought out by manufacturers to aid in the economical maintenance of railway properties.

A. R. E. A. Agenda Assure Interesting Convention

Fifty-first annual meeting to feature 22 technical committee reports and many addresses on pertinent subjects, including current research projects. Gurley is luncheon speaker.

T. A. Blair
President, A.R.E.A.

Members and guests of the American Railway Engineering Association will have a busy time if they "take in" all the interesting things to be seen and heard at Chicago, March 10-13. On Monday, the 10th, the National Railway Appliances Association will open a record exhibition of products at the Coliseum, which will remain on view until Thursday afternoon. On Tuesday morning the three-day annual meeting of the A.R.E.A. will get under way at the Palmer House; the program will consist primarily of committee reports and addresses.

F. G. Gurley
President, Santa Fe

PROGRAM

TUESDAY, MARCH 11

Opening Session—9:45 to 12:15
Grand Ballroom

Address by T. A. Blair, president
Report of N. D. Howard, secretary
Report of J. D. Moffat, treasurer
Greetings from the Signal Section, A.A.R., E. S. Taylor, chairman
Greetings from the Electrical Section, A.A.R., H. F. Finnemore
Address by J. H. Aydelott, vice-president, Operations and Maintenance Department, A.A.R., on "The Impossible in Transportation—Can the Railroads Stage a Repeat Performance?"
Address by G. M. Magee, research engineer, Engineering Division, A.A.R., on "A Review of Research Developments in 1951"
Reports of Committees on
- Yards and Terminals
- Economics of Railway Location and Operation—Address by W. T. Rice, general superintendent, Richmond, Fredericksburg & Potomac on "Factors Affecting the Economies of Railway Operation"

Afternoon Session—2:00 to 4:45
Grand Ballroom

Reports of Committees on
- Highways—Address by W. J. Hedley, assistant chief engineer, Wabash, on "Second Report on the Achievement of Grade Crossing Protection"
- Cooperative Relations with Universities—Address by O. W. Eshbach, dean, Northwestern Technological Institute, on "Implications of the Manpower Situation"
- Contract Forms
- Records and Accounts
- Water Service and Sanitation

WEDNESDAY, MARCH 12

Morning Session—9:00 to 12:00
Red Lacquer Room

Reports of Committees on
- Wood Bridges and Trestles—Address by Alan D. Freas, engineer, Forest Products Laboratory, on "Laminated Wood: Possibilities for Railroad Use"
- Clearances
- Waterproofing—Address by J. B. Blackburn, research engineer, Purdue University, on "Tests on Waterproofing Coatings for Concrete Surfaces"
- Impact and Bridge Stresses
- Masonry—Address by George H. Paris, railroad representative, Structural Bureau, Portland Cement Association, on "Concrete Durability at a Price"
  Address by Dr. R. B. Peck, research professor of soil mechanics, University of Illinois, on "The Bearing Capacity of Clays"
- Iron and Steel Structures—Address by Dr. Joseph Bigos, director of research, Steel Structures Painting Council, on "Investigations Under Way and Proposed by the Steel Structures Painting Council"

Association Luncheon—12 Noon
Grand Ballroom

Announcement of results of election of officers
Address by Fred G. Gurley, president, Atchison, Topeka & Santa Fe

Afternoon Session—2:30 to 5:15
Red Lacquer Room

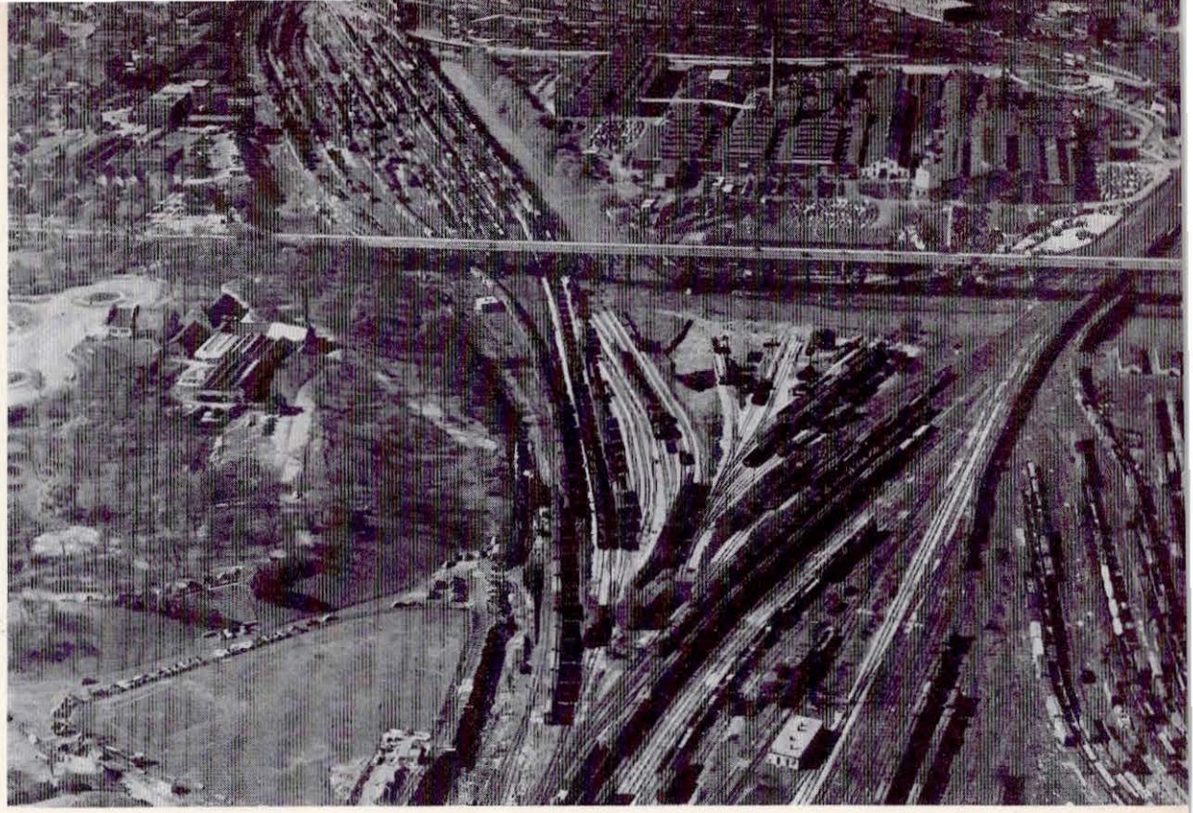
Reports of Committees on
- Wood Preservation
- Buildings
- Maintenance of Way Work Equipment
- Economics of Railway Labor—Address by G. M. O'Rourke, assistant engineer maintenance of way, Illinois Central
- Roadway and Ballast

THURSDAY, MARCH 13

Final Session—9:00 to 12:30
Grand Ballroom

Reports of Committees on
- Continuous Welded Rail
- Ties—Address by G. M. Magee, research engineer, Engineering Division, A.A.R., on "Progress in the A.A.R.—N.L.M.A. Crosstie Research Project"
- Track—Address by C. J. Code, engineer of tests, maintenance of way, Pennsylvania, on "Maintenance of Way Tests"
- Rail—Address by C. J. Code, engineer of tests maintenance of way, Pennsylvania, on "Supersonic Inspection for Rail Web Defects"
  Address by G. M. Magee, research engineer, Engineering Division, A.A.R., on "Stress Measurements in 115-lb. RE and 132-lb. RE Rail on Curved Track"
  Address by R. E. Cramer, special research associate professor, University of Illinois, on "Shelly Rail Studies at the University of Illinois"
  Address by R. S. Jensen, research assistant professor of engineering materials, University of Illinois, on "Joint Bar Research"

Closing Business
Installation of Officers



YARD AND TERMINAL IMPROVEMENTS, designed to speed service and reduce costs, form the largest category of construction work planned by the railways for 1952. Typical of these projects is the Milwaukee's Air Line yard, at Milwaukee, Wis. The face of this yard is being literally lifted into a modern hump-retarder system.

"Roadway" Budgets Are Much Larger—

But Only Slightly More Work Is Planned

During 1952, the railroads of the United States and Canada expect to spend an estimated $450,000,000 for additions and betterments to their fixed properties, $1,880,000,000 for maintenance of way and structures, and $19,800,000 for 9,800 units of work equipment and power tools. Should these plans be consummated this year, "road" capital expenditures will be the largest since 1930; expenses for maintaining the fixed properties will be the highest of record, largely because of increased costs; and more money will be spent for work-equipment purchases than ever before in one year. By such high capital expenditures the railroads expect to put their physical plant in condition to effect economies of operation that will contribute to increasing their net income and to prepare their tracks and structures for the economical handling of anticipated high volumes of traffic. For the record maintenance allotments, they plan to lay 2,011,000 net tons of rail, to install 43,000,000 ties, and raise 26,000 miles of track.

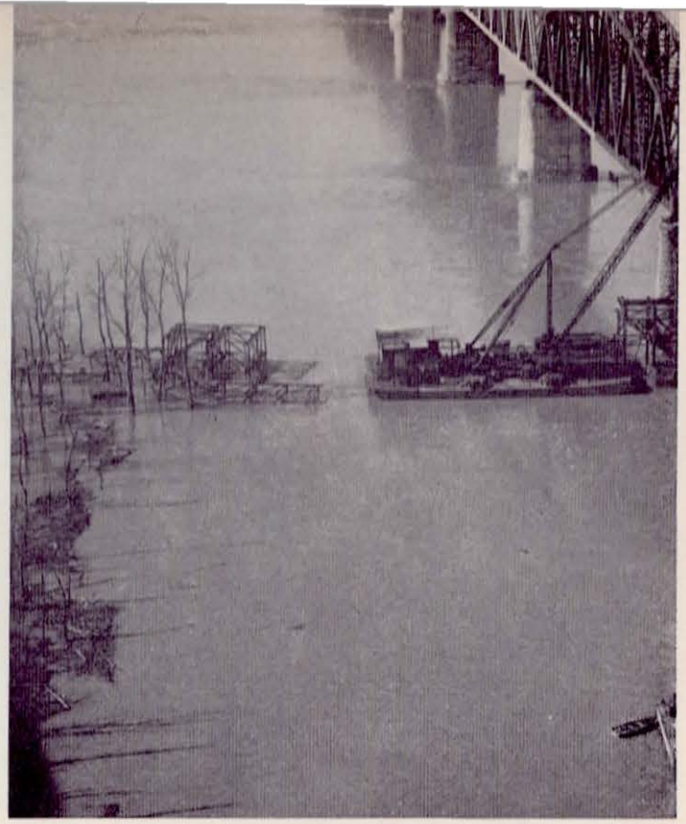
With a forthright attention to need, and despite possible shortages of materials, the engineering officers of the railways of the United States and Canada have planned to spend more money for construction of new facilities in 1952 than in any year within the last three decades. Beginning the year with "carry-over" projects under way on which more than $200,000,000 was yet to be spent, railway managements have committed themselves to new authorizations that assure a high volume of completed work at the year end.

This estimate is based on information given to *Railway Age* by 35 roads, which plan to make "road" capital expenditures totalling $208,659,176. Of these, 18 indicated that their expenditures would be greater than in 1951—with one road planning to spend almost three times as much. Three roads, all with heavy carry-overs, plan to spend about the same as in 1951. Altogether, these roads plan to spend $25,800,000, or 12½ per cent, more in 1952 than they spent in 1951.

As in the past several years, much of this money has been allocated for yard-and-terminal improvement work, thereby making this the largest single category of capital improvements planned for 1952. This was to be expected since all the railroads of the United States and Canada reported that they had at year end a total of more than $74,000,000 authorized for yard-and-terminal improvements which had not been completed. This was by far the largest category of incompleted projects. The magnitude and widespread activity of this type of improvement work is further indicated by the fact that 80 per cent of the roads supplying budget information to *Railway Age* have work of this nature planned for this year.

Locomotive repair and servicing facilities, the perennial favorite of construction planners since 1945, appear to be headed for second-place ranking among the categories of capital improvements being made during 1952. Fewer roads than usual plan large expenditures for this

MORE NEW LINES are being built currently than at any time within the past several years. This International-Harvester tractor and Le Tourneau 25-yd. scraper are engaged in moving a million yards of earth and rock for a new line in Colorado.



LARGER BRIDGE BUDGETS include the replacement of the Illinois Central's bridge across the Ohio river at Cairo, Ill. The

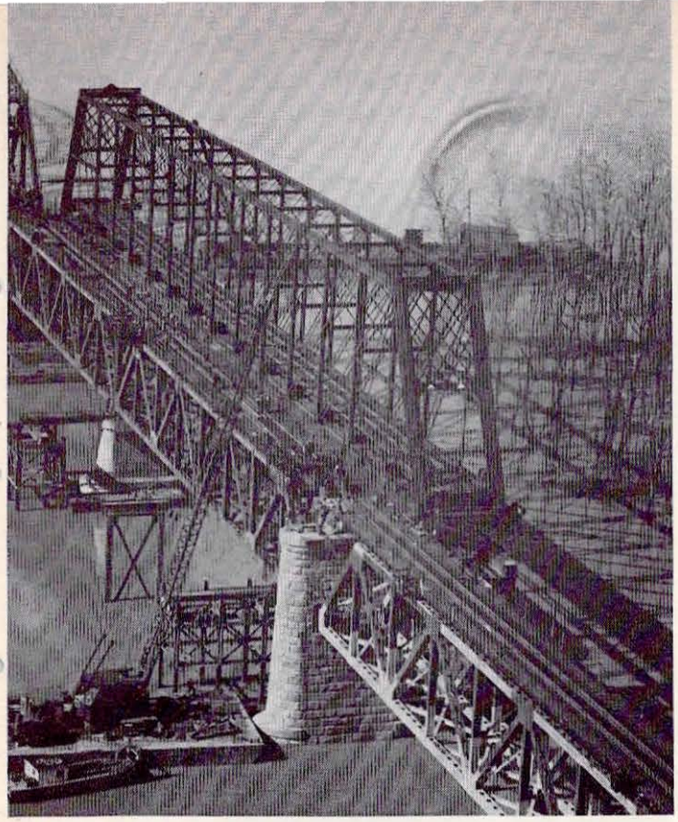
type of facility, but a greater number of railways have such structures to build. Whereas six roads planned to spend more than $1,000,000 each for locomotive servicing facilities in 1951, only three roads plan to make expenditures that high in 1952. On the other hand, one of these roads has earmarked more than $12,000,000 for this purpose.

The construction of new lines constitutes the third largest category of capital improvements planned this year by the roads that gave detailed information as to their budgets. In view of the increased activity in work of this nature during the past several years, it should remain in the forefront of improvement plans for the next several years. Were it not for the fact that individual projects of this type of work take longer to finish than others, it might well be that it would surpass all others in that time. As reported in the latest Review and Outlook Number of *Railway Age*, more than 134 miles of new line are now under construction in the United States and 513 miles are now being built in Canada. These undertakings could easily result in the construction in 1952 of a greater mileage of track than has been built in any of the past several years.

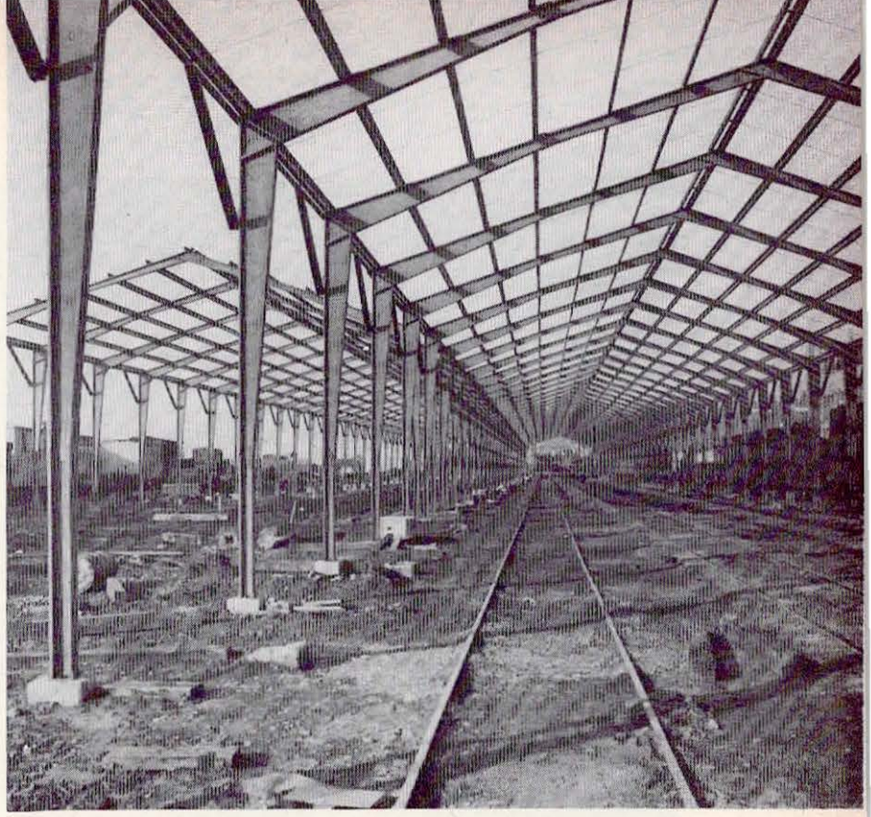
The construction of signaling and communication facilities will continue in 1952 at a rate at least equal to that which prevailed in 1951. Few railroads gave *Railway Age* details as to their specific plans regarding such facilities for the coming year. However, they expect to spend in the aggregate, more than $50,000,000 for miscellaneous construction, the major part of which they state will involve work done by their signaling and communications employees. In spite of the fact that 21 roads report that work on the elimination of 103 grade crossings is now in progress or planned for this year, much of the improvement work coming under the jurisdiction of the signaling departments will include the protection of pedestrian and vehicle movement at grade crossings by the installation of automatic gates, flasher signals or other devices. Specifically, 32 roads reported that plans were completed for the installation of various types of crossing protection at more than 700 crossings in 1952. This would indicate that the railways as a whole will protect about as many crossings this year as they did last. The actual number of additional crossings protected totaled 1,084 in 1947, 1,391 in 1948, 1,571 in 1949, 1,573 in 1950, and 1,406 in 1951.

To accomplish a little more work than they completed in 1951, the railroads of the United States and Canada expect to spend much more money than they did last year. They accomplished a considerable amount of such work in 1951, but at the highest cost in history. There is nothing in sight at present that can prevent a new record in dollar cost being established in 1952, even for the same level of accomplishment. On the basis of reports received by *Railway Age* from 35 roads, maintenance expenditures of all the roads of the two countries will reach an estimated total of $1,880,000,000, for slightly more units of work.

Estimates of the total tonnage of rail to be laid and the number of crossties to be installed, shown in the summary at the beginning of this article, are based on reports from the major Class I line-haul railways of the country. These reports indicate that most roads intend to lay as much rail as they can get from the mills under the government Controlled Materials Plan. The urgency of their need for rail is known. Since 1942 the deferred maintenance in rail had accumulated to 6,760,440 net tons by the end of 1951. That the railways are anxious to prevent this deficiency from becoming more acute is indicated by the fact that 54 roads have planned to lay more rail in 1952 than they did last year, and two roads expect to lay more than twice as much. Further evidence of their desire to lay as much rail as possible is the fact that three roads plan to install more than 100,000 net tons each in 1952, whereas in 1951 there was not a single road that reported laying that much. On the other hand,



last two spans were rolled into place recently by the American Bridge division of United States Steel Corporation.



BUILDING CONSTRUCTION in 1952 is expected to be subject to material price ties. The rigid-frame construction of this "rip track" shelter recently completed by the Spokane, Portland & Seattle at Vancouver, Wash., is said to have saved steel.

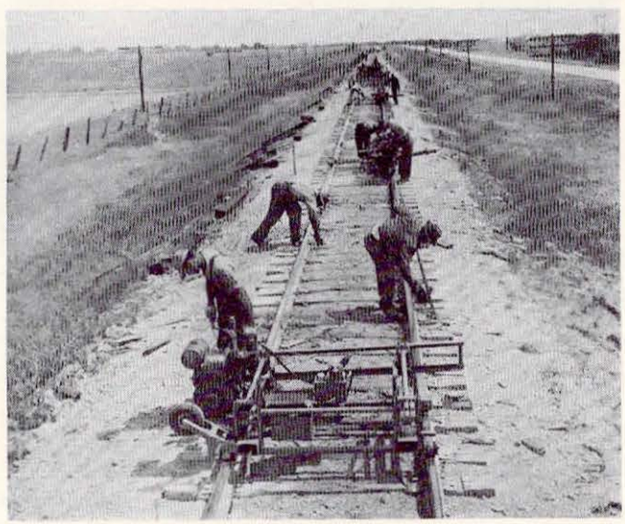
16 roads expect to lay less rail in 1952 than they did last year, and five roads have planned to install about the same amount as they did the year before.

In 1951, crosstie renewals established an all-time low, contrary to budgets made at the beginning of the year. The Interstate Commerce Commission, in its railroad maintenance study made by the engineering section of the Bureau of Valuation, has estimated the normal requirements for the Class I roads alone as 50,211,000 ties in 1950 and 51,343,000 in 1951, whereas they actually replaced only 33,091,000 and 29,300,000 ties in those years, respectively. Thus the deferred maintenance in crossties has now accumulated to more than 127,000,000 ties and is increasing at the rate of more than 15,000,000 ties per year. Of the Class I roads that reported their tie-renewal plans for the year, 46 expected to put in more ties than they did in 1951—one tripling its tie allotment—while 22 expected to install fewer ties and 11 about the same number as the year before.

Coincident with increased rail and tie-renewal programs, 27 roads expect to raise a total of 18,858 miles of track, and 16 roads expect to clean 4,587 miles of intertrack ballast and 5,740 miles of shoulder ballast. Complementary to their ballast-cleaning programs, 25 roads plan to crib-clean 3,174 miles of track. Another road, unable to give detailed figures as to the amount of crib cleaning planned, reported that it would clean as much as two new crib-cleaning machines could accomplish.

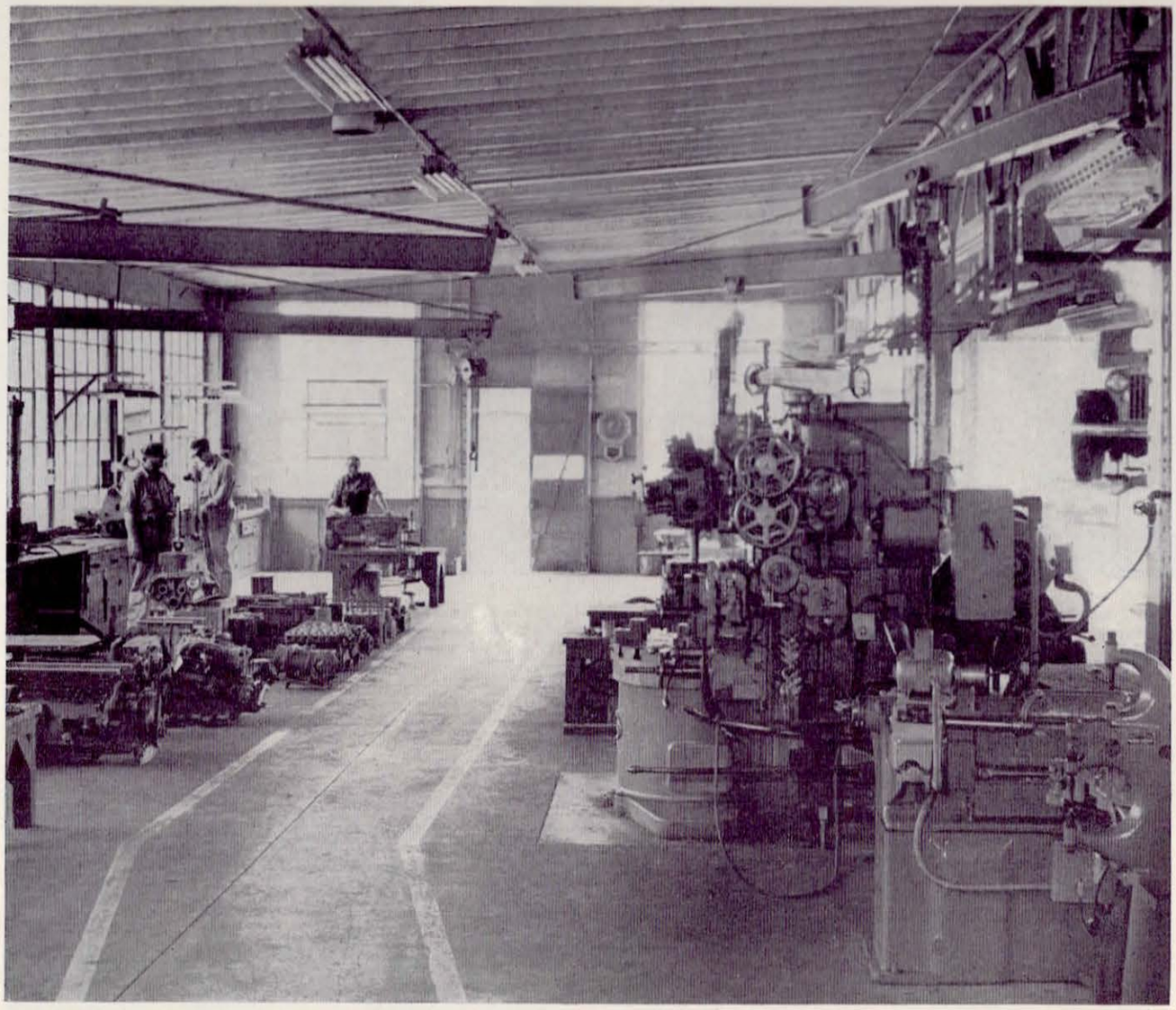
Not to be outdone by the roadway forces, bridge and building men have scheduled, in 1952, larger maintenance budgets than in 1951. In fact, 34 roads reported to *Railway Age* that they plan to spend a total of $39,414,897 for the maintenance of bridges and $41,115,544 for the maintenance of buildings during the current year. These plans represent a net increase of $2,955,062 for bridge work and $1,525,297 for building repairs.

To accomplish the amount of work planned at the lowest possible cost, railway officers report that they plan to buy at least 9,800 machines and power tools at a record expenditure of $19,800,000*. This estimate of prospective purchases compares with 9,700 units bought in 1951 and with 8,700 units in each of the two preceding years. In the light of many encouraging but indefinite indications, this estimate of anticipated purchases in 1952 must be considered conservative; the fact is that the volume of purchases may even reach 10,000 units—a figure that has been exceeded only once since records of machine purchases have been kept.



ROADWAY MAINTENANCE COSTS would be even higher than they are were it not for the availability of a variety of machines such as this hydraulic spike puller recently developed to make work easier for trackmen.

*A more detailed analysis of these purchases appears in the March Equipment Economies Issue of *Railway Engineering and Maintenance*.

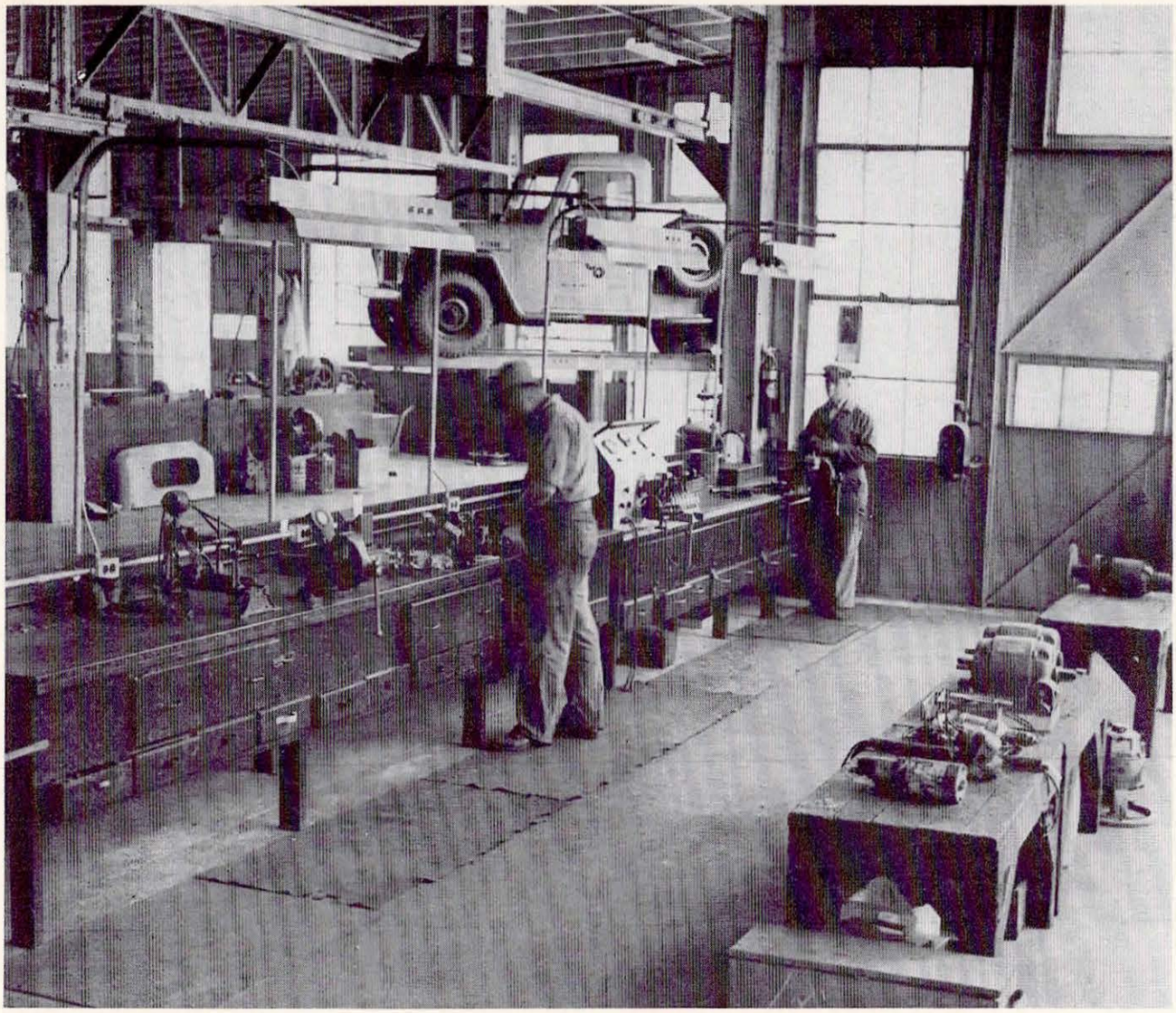


Repairs to gasoline and diesel engines are made in this area which is equipped with all necessary regular and special machine tools.

How the C. & O. Keeps Its Maintenance Machines in Good Repair

Facilities at Barboursville, W. Va., embracing 25,000 sq. ft. of floor area, are supported by an extensive organization of field inspectors, work-equipment supervisors and mechanics

Maintenance-of-way work equipment and roadway machines on the Chesapeake district of the Chesapeake & Ohio are kept operating at top efficiency with the aid of an extensive repair shop at Barboursville, W. Va. Not only is the shop designed, equipped and manned to perform its functions with maximum effectiveness, but it is backed by an organization of skilled supervisory personnel, plus an extensive field set-up of inspectors,



A wide variety of testing equipment is found in the electrical shop.

work-equipment supervisors and mechanics. The shop and its supporting organization may be said to be the outcome of a conviction on the C. & O. that one of the basic requisites for reducing costs through mechanization is to keep the machines working and that one of the essential requirements for maximum use is that they be kept in good repair.

How the Shop Has Grown

The work-equipment shop, along with an extensive reclamation plant at the same location, was first established in 1925. At that time the shop had a floor area of about 1,500 sq. ft. and was manned by three mechanics and one helper. Work was confined to the repair of motor, lever, push and trailer cars and velocipedes.

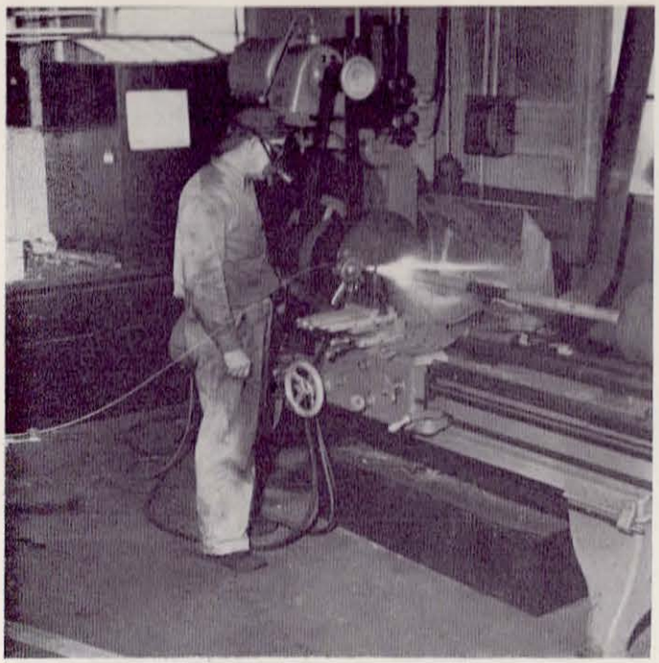
Today—as a result of the railroad's heavy reliance on work equipment—the shop has an area of about 25,000 sq. ft. and a 65-man staff, comprising machinists, electricians, carmen, boilermakers, blacksmiths, sheet-metal workers and painters, along with a foreman, an assistant foreman, and storekeeper.

This shop, which is operated in conjunction with the railroad's plant for the reclamation of maintenance-of-way materials, takes care of repairs for the entire Chesapeake district. Centralization of this work in one place, strategically located on-line, is reported to have produced more economical and faster results than if repairs were made in various division shops, and has made possible large scale salvage of repair parts.

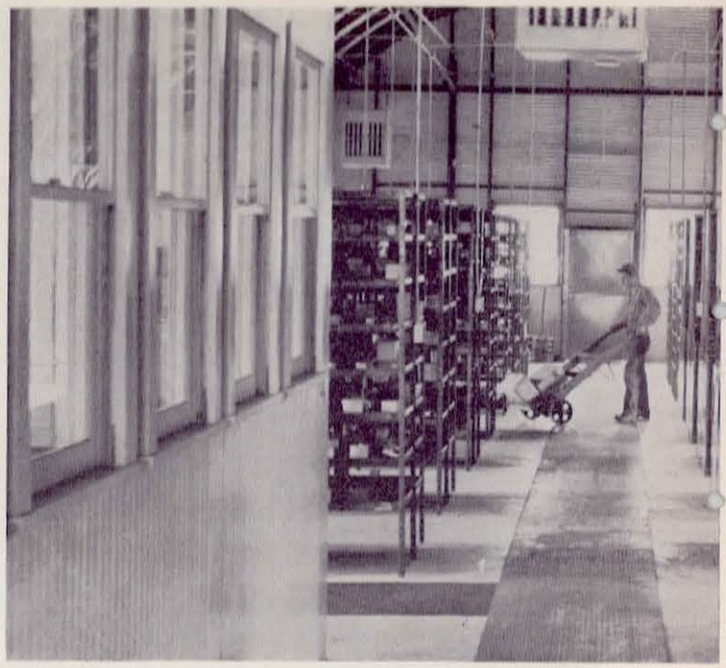
The work-equipment repair shop is divided into six units, each with its own building. These include a main repair shop, a motor-car repair shop, and sheet metal, paint and cleaning shops, plus a storeroom.

In addition to the shop buildings, there are loading platforms and ramps, tracks for getting heavy, rail-mounted machines into the shops, roadways for getting automotive vehicles into the shop (which also serve as roadways for mobile tractor cranes), motor-car storage tracks, an outside storage area for equipment awaiting repairs, and a crane test rack with a pit, where the propelling mechanisms for self-propelled cranes are tested.

The main repair shop consists of a series of divided



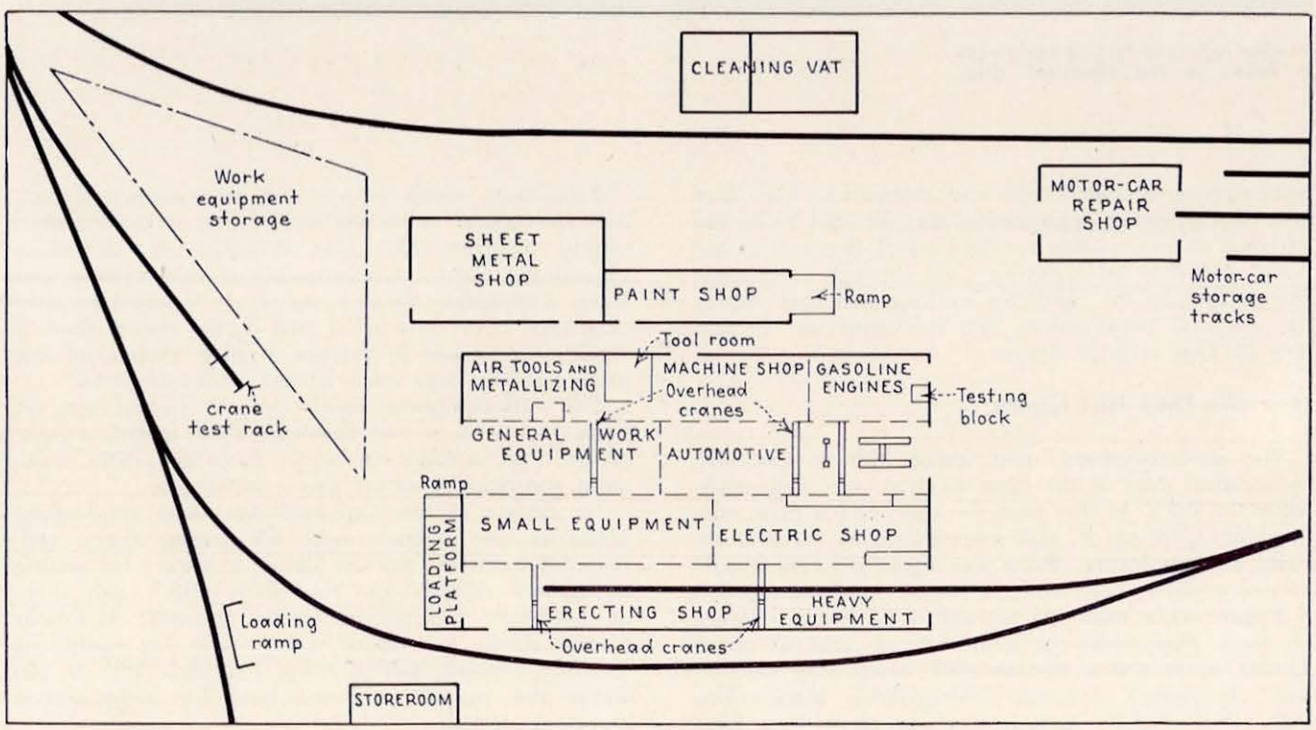
One of the more important pieces of equipment in the welding bay is this metallizing machine.



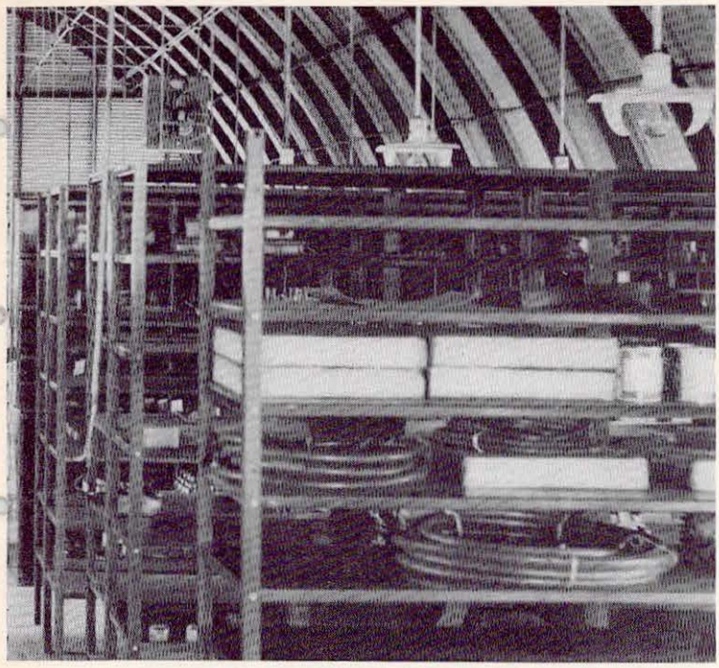
The large storeroom contains repair parts for use in the work-equipment

areas, arranged to permit continuity of operations with minimum confusion, and comprises four separate bays. The first houses an area for the repair of gasoline and diesel engines, the machine shop, welding booth, metallizing room, pneumatic tool repair space and a tool room. In the second bay the majority of space is used for the repair of automotive vehicles, with a lesser portion reserved for handling medium-sized work equipment such as tractors and large air compressors. It is equipped with three over-head traveling cranes.

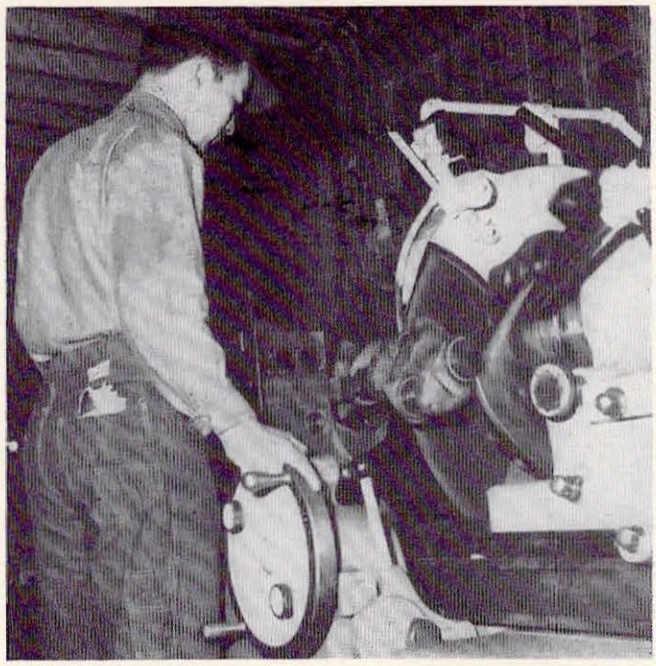
The third bay contains the electrical shop and a large area for the repair of rail-laying machines and similar small equipment, while the fourth bay, commonly referred to as the erecting shop, provides floor space and headroom for overhauling and repairing cranes and other rail-mounted equipment. The latter bay is equipped with two overhead traveling cranes, one of which is a 10-ton electrically operated unit.



The work-equipment shop consists of six principal units, as shown by this layout plan.



shop and for making field repairs throughout the Chesapeake district.



Regrinding a crankshaft in the machine shop.

The first and third bays have jib cranes and hoists advantageously located to lift heavy parts. Compressed air lines for operating pneumatic tools and convenient outlets for the use of electrical tools are provided throughout the entire shop.

In the work equipment shop are all the ordinary machine tools like lathes, drill presses, milling machines, sharpers, etc., and also a variety of special machines particularly adapted to the repair of maintenance-of-way equipment. In the engine-repair area, some of the special machines include a crankshaft grinder, a main bearing line-boring machine, cylinder boring bars, a cylinder-head resurfacer and a connecting-rod bearing boring machine. In the automotive vehicle area are a brake drum lathe, a brake-relining machine, a wheel balancer, an hydraulic hoist and compresser-air lubricating equipment; in the electrical shop can be found numerous testing machines for servicing such appliances as generators, starters, magnetos, electric tools, electric tampers, and storage batteries. The pneumatic tool repair area is equipped with air-flow meters, and the metallizing room has a metal spray outfit and a lathe for revolving the parts to be metallized

Other Shop Units

In the sheet-metal shop are facilities for the repair of motor-car windshields, cab tops and special bodies for automobile trucks, and for doing automobile body and fender work. Tool boxes and radiators also are repaired here. Machines and tools for shearing, punching and shaping metal parts are found in this shop, as well as arc-welders, a spot-welder, a body and fender straightener and a series of tools for testing and repairing radiators.

Activities in the paint shop normally are confined to the repainting and stenciling of automotive vehicles and small units of work equipment which have been repaired. An adequate number of high-power lamps are in place, both for drying and illumination, and the shop is equipped with sanders, buffers and paint-spraying equipment. One end of this shop has a ramp to facilitate movement of vehicles. The painting of motor cars is done in a special area of the motor-car shop, and heavy work equipment is painted with portable spraying outfits at various locations in and around the repair shop.

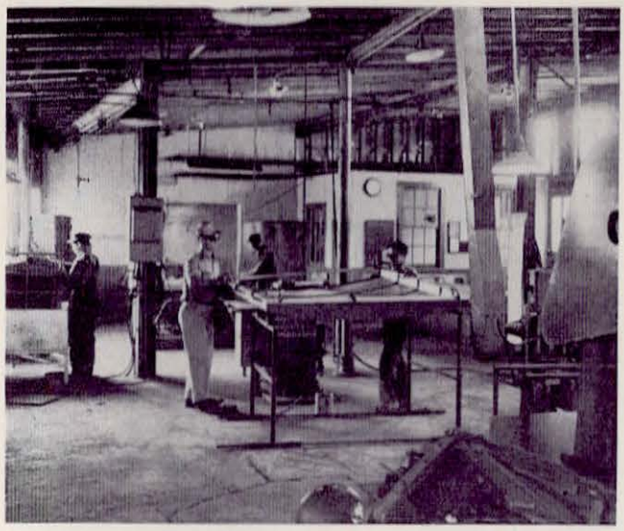
The motor-car shop repairs certain automotive bodies, motor cars (exclusive of the engines), push, trailer and lever cars, velocipedes and ditching boards. For these repairs, woodworking tools, like saws, planers and wood-boring machines, are provided, as well as power wrenches and arc-welders. Special, permanent blocking and anchoring devices for small machines in tool cars and heavy machines on flat cars are provided and installed here. To facilitate the movement of cars, the shop has a standard-gage track running throughout its length and outside to other tracks where cars can be stored.

Repairs to clamshell and dragline buckets, crane booms, boilers, speader wings and cabs are performed in the boiler shop, while general blacksmith work, forging and some types of welding are done in the frog and switch shop. The boiler shop is equipped with arc-welders, rolls, breaks, drill presses and a punch and shear.

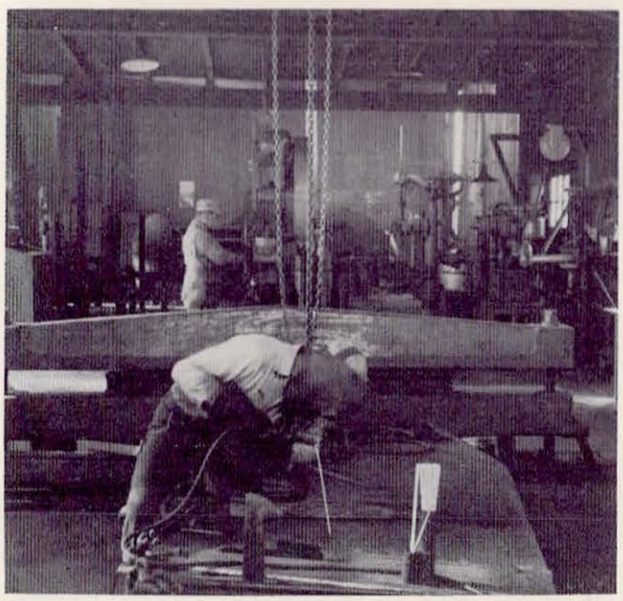
When machines arrive for repairs, they are first taken to the cleaning shop where they are cleaned with a portable high-pressure, steam-cleaning machine. They are then dismantled, and the parts washed by a steam cleaner, or they are placed in wire baskets and immersed in cleaning vats. An overhead traveling crane helps in the movement of heavy parts.

The storeroom, which stocks about 10,000 separate items, not only supplies the work-equipment repair shop with all repair parts, but furnishes all parts for field repairs throughout the Chesapeake district. This avoids duplication of parts and permits a minimum inventory.

Insofar as it is possible to do so, all repairs, except



The sheet-metal shop has complete facilities for repairing such units as motor-car windshields and cab tops and for doing body and fender work.



Excavator buckets, crane booms, boilers, spreader wings and cabs are repaired in the boiler shop.

those of an emergency nature, are completed under a shop program. This program is prepared on the basis of handling during the winter months those machines which operate only during the usual working season, with an attempt to concentrate on the non-seasonal machines during the spring, summer, and fall. Such a program necessitates the receipt of essential information sufficiently far in advance to permit procurement of needed repair parts by the time the machine reaches the shop. This information is provided by the field men who are in close touch with the machines and know their current condition. Where possible, advance notice is furnished by the division personnel as to when a machine will have to be shopped, and they also report the type and extent of repairs to be made. The inspector of work equipment then inspects the machine and furnishes a work report, along with a list of the parts needed.

The Supervisory Organization

A supervisor of work equipment is in charge of the work-equipment shop. His main duties are to prepare the shopping program, to see that the shop repairs are expedited in the most efficient and economical manner and to make sure that the machines are in prime condition and ready for continuous operation when they leave the shop.

There is also a system work-equipment organization, with headquarters at the Barboursville shop, which has supervision over the various functions of work equipment, from the time it is purchased until its retirement. This organization is composed of a superintendent, whose duties also include that of reclamation, and a small group of subordinate officers, whose duties relate to work equipment only.

This organization comprises an engineer of work equipment, his assistant and two work-equipment inspectors. The work-equipment engineer prepares specifications, standards for uniform practice and company rules relating to the operation of equipment. He investigates requests for new machines and replacements, and performs the detail work in connection with their purchase. Also, he assigns and transfers machines made available for purchase, makes field studies and tests of new and existing machines, assists the shop force in improving machines, makes studies of manual track work with a view towards mechanization, prepares new sketches and drawings pertaining to equipment, prepares periodic and special reports to the chief engineer, and is responsible for the maintenance of essential reports and records.

Duties of Inspectors

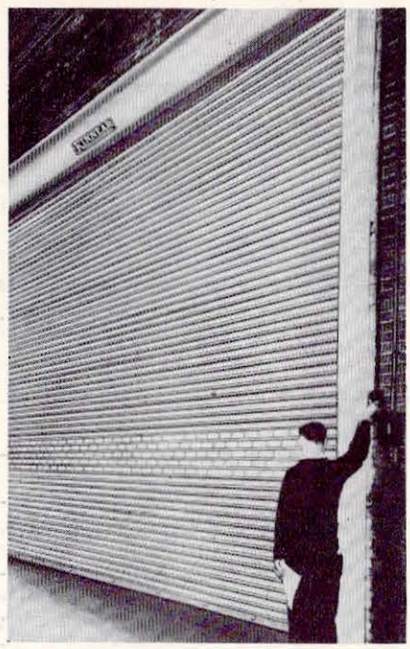
The two work-equipment inspectors, whose respective territories extend east and west from Barboursville, are charged primarily with assuring that all machines in their territory are kept in good operating condition. They make periodic inspections of all units and report on their condition, assist the field mechanics where necessary, check requisitions for repair parts and keep close control of repair parts in the field. They also investigate causes of major machine failures, assist in the placement of new and overhauled machines and help in programing shop repairs.

There are also four work-equipment supervisors strategically located on four of the more important divisions. On the other divisions work equipment activities are supervised directly by the supervisor of bridges and buildings or by the supervisor of water supply. The supervisors, who report directly to the division engineers, have direct charge of the work-equipment mechanics and machine operators.

Reporting directly to the work-equipment supervisor, or to the other supervisor in charge of work equipment, is a group of work-equipment mechanics, who are generally distributed by subdivisions, or track supervisors' districts. Their principal duties are to keep their equipment in good operating condition by preventive maintenance and by repairing breakdowns promptly.

The shop and the work-equipment organization as a whole are under the general supervision of L. T. Nuckols, chief engineer, and his assistant, C. B. Porter. They are under the direct supervision of R. K. Johnson, superintendent of work equipment and reclamation.

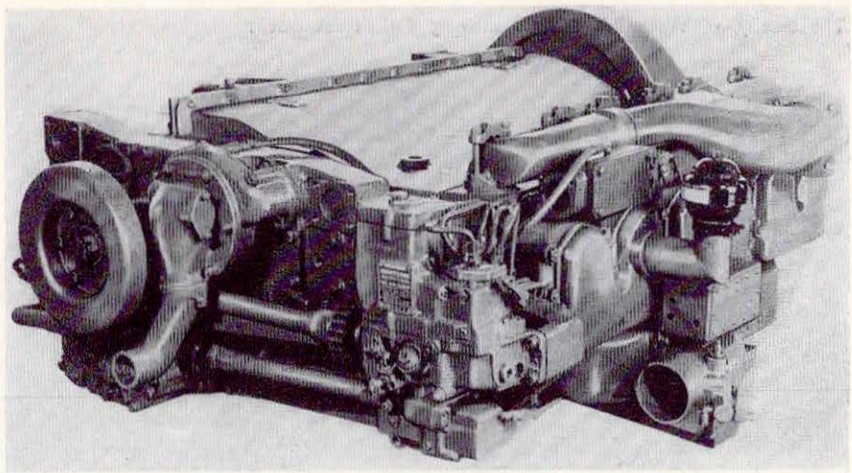
NEW and IMPROVED PRODUCTS of the MANUFACTURERS



Lookout Windows in Steel Rolling Doors

Now you will be able to see from the inside of a building everyone who is on the outside of a metal rolling door before opening it, through the use of new slat-type steel rolling doors recently announced by the Kinnear Manufacturing Company, Columbus, Ohio. While retaining the basic construction of its metal rolling doors, the manufacturer will now furnish them with narrow, transparent panes of heavy-duty plastic in one or more of the interlocking steel slats of the curtains that coil above the lintel.

The "window slats" are at or near eye level and, in addition to allowing the door operator to view visitors before admitting them, thus affording greater protection to warehouses and similar buildings from access by unauthorized persons, also allow the entry of daylight through the door when it is closed. It is pointed out that the latter feature will promote the cause of safety by helping to prevent accidents to personnel moving about in areas that otherwise would be dark.



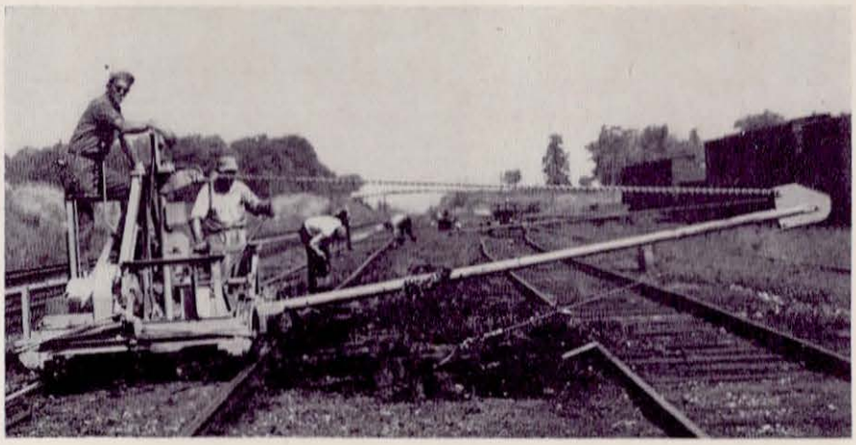
Compact Horizontal Diesel Engine

A new 200-hp. horizontal diesel engine has recently been announced by the Cummins Engine Company, Columbus, Ind. Designated as model NHHB-600, the engine is a six-cylinder full diesel, which operates at 2,100 r.p.m with a compression ratio of 15.5 to 1. Total displacement is 743 cu. in., with a bore and stroke of 5⅛ in. by 6 in. Because of its compactness the NHHB-600 is said to be particularly suited for installation in buses and rail cars. Dimensions of the new engine are: length, 63 15/16 in.; width, 55¼ in.; and height, 22¾ in. The weight is 2,285 lb.

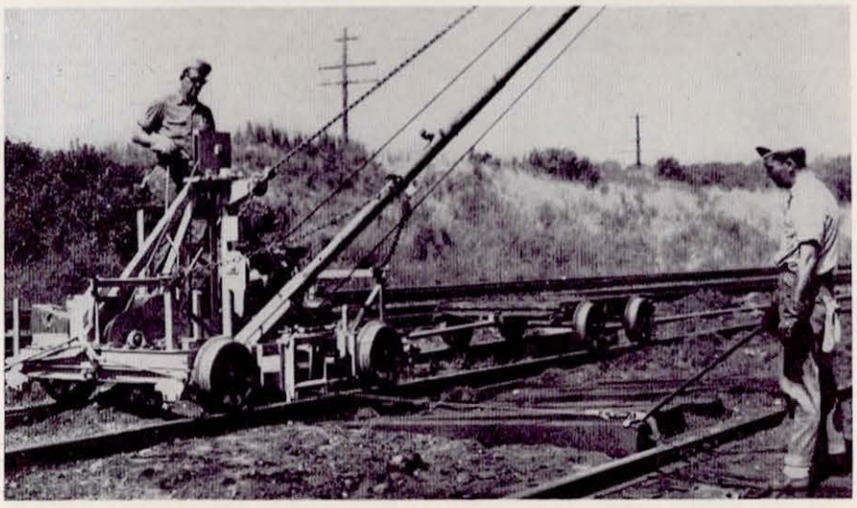
The bucket on the Model HR Payloader has a capacity of 1 cu. yd. and is hydraulically controlled.

Tractor Shovel

The Frank G. Hough Company, Libertyville, Ill., has announced the availability of the Model HR Payloader. This machine can be employed on all types of excavating, grading, building and construction jobs. Some of its features are: A 4-wheel drive with full-reversing transmission providing 4 speeds in each direction; a 1-cu. yd capacity hydraulically controlled bucket; rear-wheel steering with power booster; powerful hydraulic brakes; unusual operator visibility; and large pneumatic tires. This machine, available with either diesel or gasoline power, has a total weight of 12,400 lb., a large portion of which can be applied to the bucket cutting edge to facilitate penetration in hard digging and below-grade excavation. The Model HR Payloader is 6 ft. 4 in. in height, 7 ft. 5¾ in. wide at the rear axle, and 16 ft. 10 in. long with the bucket at the carry position. Accessories available include bulldozer blade, lift fork, crane hook, bucket teeth, V- and one-way snow plows, cab, and snow bucket.



The Gandy, with boom lowered, removing a tie from track.



The Gandy, shown here engaged in tie insertion work.

Tie Inserter-Puller

The Nordberg Manufacturing Company, Milwaukee, Wis., has developed a self-propelled three-purpose machine, called the Gandy, which is a combination tie puller, tie inserter, and light crane, designed primarily for use in out-of-face tie-renewal and track-raising operations. On such jobs, it can be employed to remove and insert ties and to perform a variety of light loading jobs.

The Gandy is comprised basically of a frame mounted on four wheels, a power-driven winch, and a telescoping boom. When employed in tie-pulling, the boom, fully extended, is lowered to an almost horizontal position at right angles to the track, and a brake and thrust member is placed in contact with the gage side of the head of the rail on the operator's side. The winch cable, extending from the end of the boom, is fastened to tongs attached to the end of the tie, so that when power is applied the tie is pulled from the track.

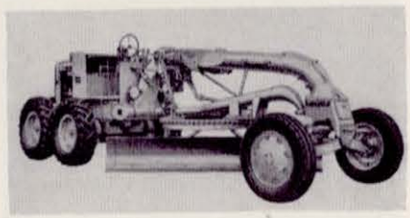
To insert new ties with the Gandy, the boom is first raised to a position approximately 45 deg. to the horizontal. A demountable sheave is locked in position on the lower portion of the frame and a detachable thrust member is placed in position on the machine and against the rail under which the tie must first pass. The cable is then passed around the sheave and out over the head of the rail. The free end of the cable is fastened to a specially designed tong which grips the end of the tie. The operator causes the winch to draw in on the cable, and the operator's helper guides the tie as it is pulled into place by means of a long handle attached to the special tong. The helper can control the tie both in direction and elevation by the pressure he exerts on the handle.

When used as a crane, the Gandy will handle loads up to 2,000 lb., and may be employed to load or unload ties and other material, and to lift comparatively light track machines on or off the track.

The Gandy is powered by a Briggs & Stratton Model 14B air-cooled, single-cylinder, 4½-hp. gasoline engine, which drives the two double-beveled frictions (for propulsion and winch) through a fluid coupling.

Patching Compound

The Permamix Corporation, Chicago, has recently announced the availability of Permamix, a quick-drying, ready-mixed floor-patching compound. The manufacturer states that this compound may be effectively employed for protecting, resurfacing and repairing all types of floors, ramps, platforms and loading docks. This material is said to be immune to the effects of temperature and humidity extremes, in addition to possessing the property of becoming harder with continued use. Permamix can be applied using only a broom and a paving tamper. It is supplied in 50-lb. fiber drums, with a can of primer packed inside each drum.



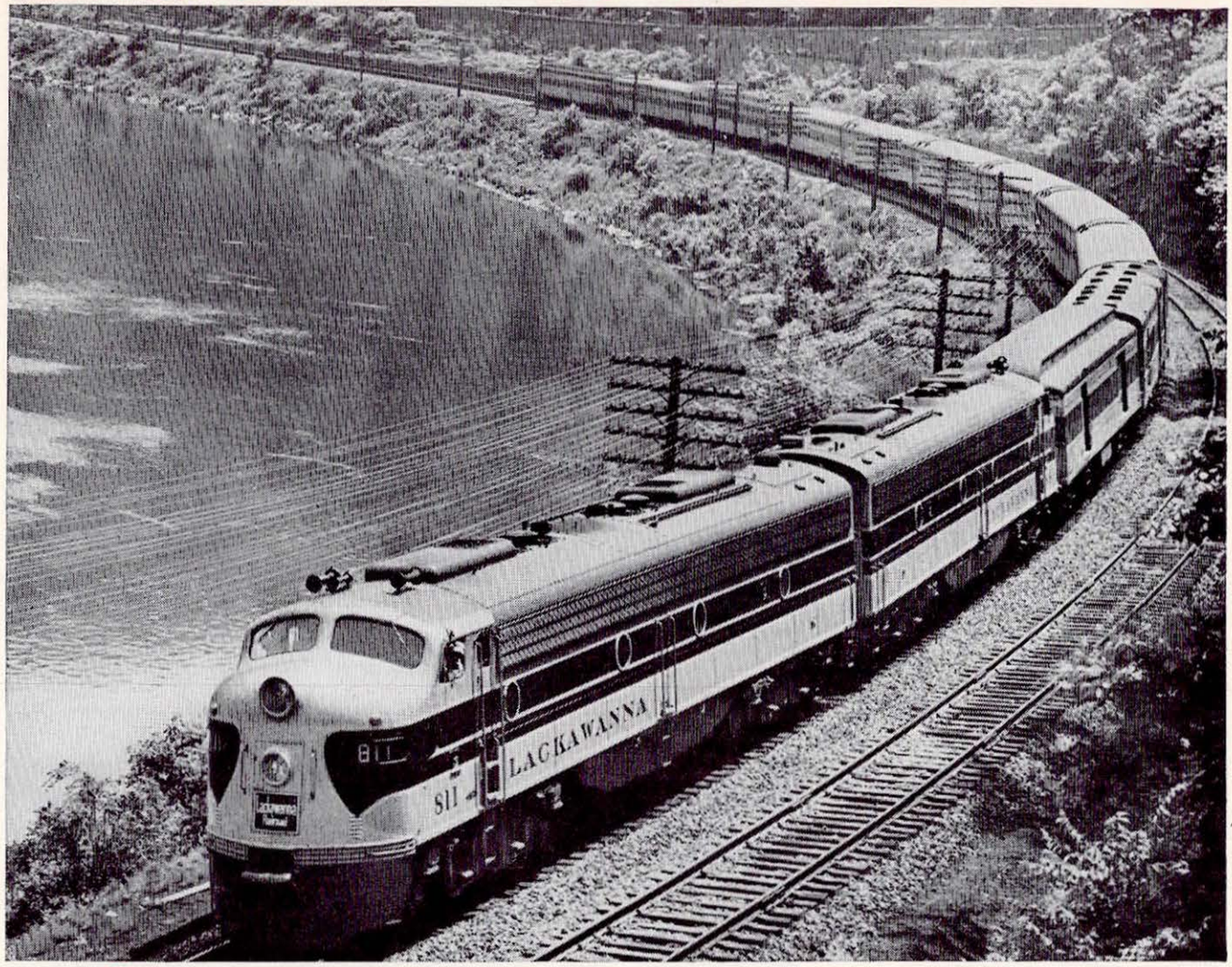
New Motor Graders

The Tractor Division of the Allis-Chalmers Manufacturing Company, Milwaukee, Wis., has recently announced two completely new motor graders, Models AD-40 and AD-30. They are said to incorporate features of construction and design that permit new standards of performance, operating ease and service simplicity. Model AD-40, which weighs 23,000 lb., is powered by a 4-cylinder, 2-cycle diesel engine developing 104 brake hp., while the Model AD-30, weighing 22,700 lb., is powered by a 3-cylinder, 2-cycle diesel engine developing 78 hp.

Features of these motor graders include tandem drives said to guarantee full traction under any ground conditions; completely enclosed hydraulic booster systems claimed to provide effortless steering; high axle clearances; and accurate blade control, all of which are said to combine to offer precision cuts and smooth finishes on construction or maintenance work. Accessories and special attachments are available for these graders, thus increasing their adaptability to meet a wider variety of specialized applications and conditions.

New standards of operating ease said to be incorporated in these graders include complete visibility; needle-bearing mounted operators' seats, freely accessible controls, large roomy platforms on single tubular frames, and all-around operator comfort. Accessibility to major assemblies for repair or service is another important feature of these machines. By simply tilting forward the combined fuel tank and seat, the transmission, clutch and drive-shaft

ESSO COBLAX



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have been specifically developed to provide highly dependable gear lubrication for traction motor drives on electric and diesel-electric locomotives; gas electric and multiple-unit cars; and many other locomotive and car lubrication requirements. Esso COBLAX is available in a wide range from fluid oils to semi-solid products... "tailor-made" for railroad applications.

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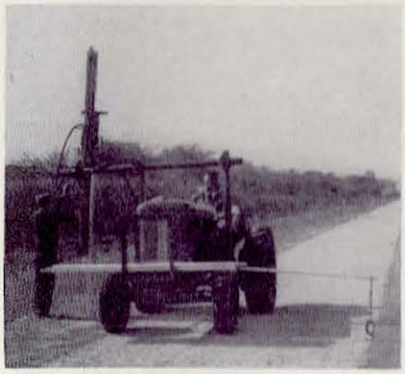
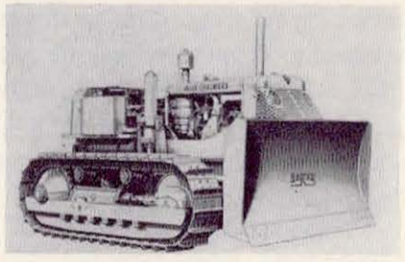
assemblies are exposed, enabling both the clutch and transmission to be removed without disturbing the engine or floor plates.



Pneumatic Stake And Post Driver

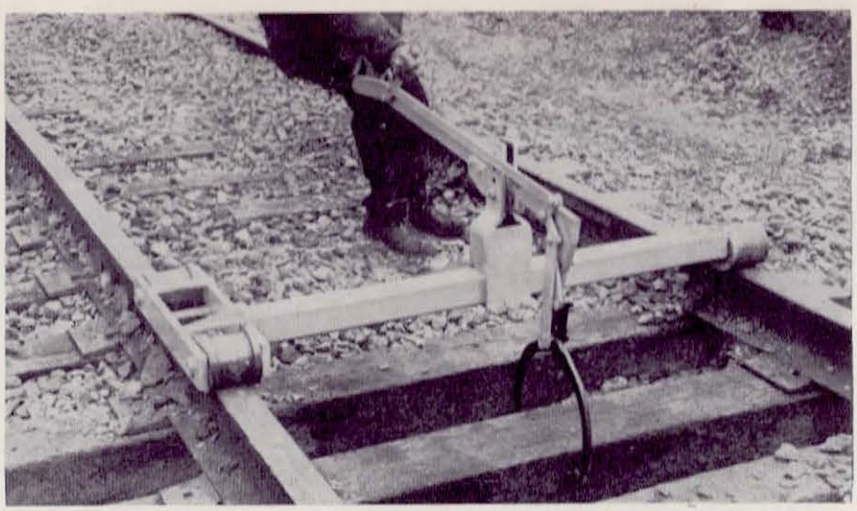
Schramm, Inc., West Chester, Pa., has announced the availability of the Pneumadriver, which is said to possess the ability to drive all types of stakes and wood or steel fence posts in one-tenth the the time required for driving by hand. The device consists of a 7-ft. air feed and a paving breaker, designed for mounting on the Schramm Pneumatractor. The paving breaker is fitted with a special steel designed to fit the stake or post to be driven. The manufacturer states that, when the unit was employed on construction of the New Jersey Turnpike, over 350 stakes were driven per day by a two-man crew using a Pneumadriver, as compared with an estimated 4 stakes per man-hour when a 5 to 15-man crew was engaged in hand-driving stakes.



Crawler Bulldozer

Allis-Chalmers Manufacturing Company, Milwaukee, Wis., has developed a new piece of earthmoving equipment by taking its recently developed Model HD-9 diesel-powered crawler tractor and mounting on it the new 9X bulldozer produced by the Baker Manufacturing Company, Springfield, Ill. The 9X is known as the "No-Push-beam" bulldozer because it employs a new type of lifting mechanism. Its size makes this unit particularly applicable for railroad work. The overall blade width is only 96 in., thus eliminating overhang on flat cars or highway trailers, and the blade is 6 in. higher than the standard 114-in. blade. It has a full 37-in. rise above the ground, and a full 13-in. drop below the ground.

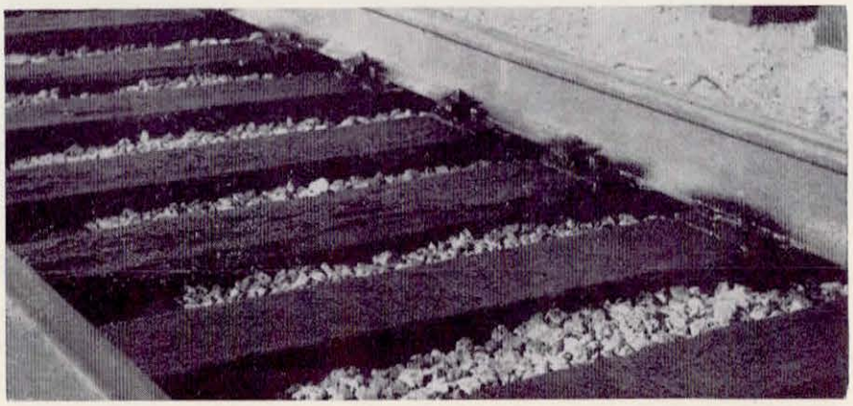
Heavy stablizer bars from the moldboard to the truck frame absorb torsional strain. Cylinders connect to the stablizer bars through spherical bear-



Tie Nipper

The G. & H. Tie Nipper has recently been placed in production by the Railway Track-work Company, Philadelphia.

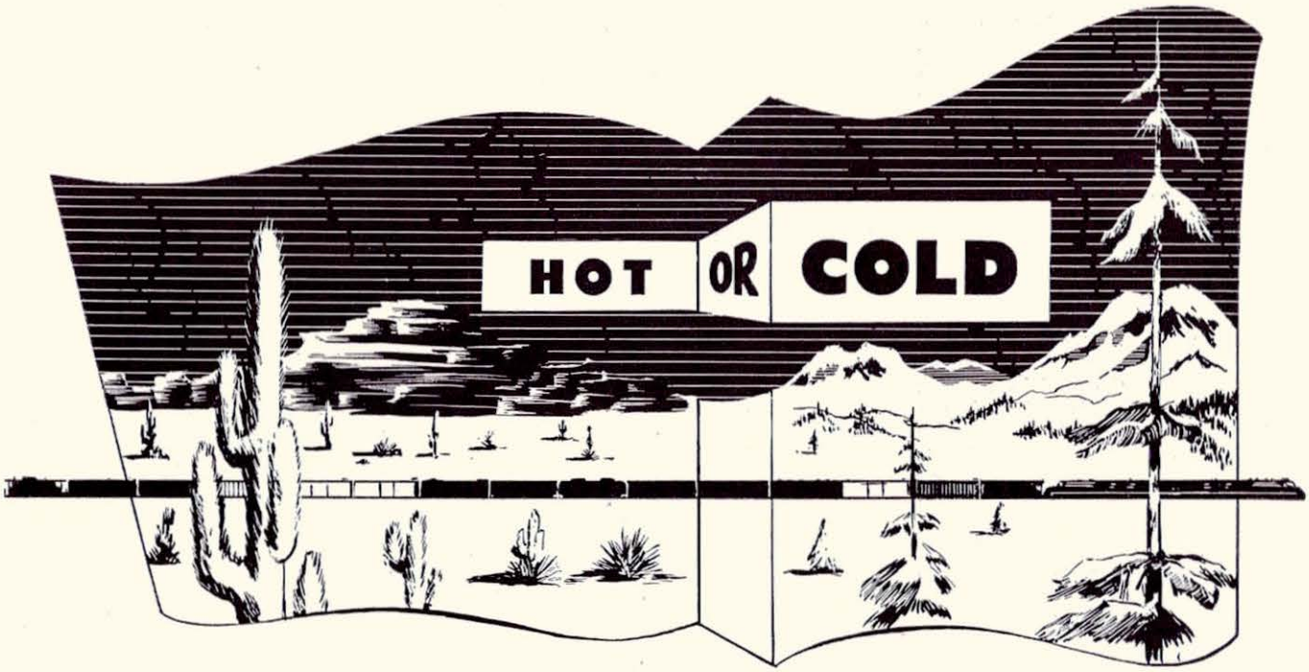
This device consists of a crossbeam supported on one side by a roller and on the other by a pair of double-flanged wheels which ride on the rails. Mounted on the crossbeam is a frame which serves as the fulcrum for a lever by which the lifting action for nipping the ties is applied. Fastened to the forward end of the lever is a pair of tie tongs which can be fastened and released by a lever within convenient reach of the operator. By applying his weight on the end of the lever, one man can easily exert enough pressure to nip the tie against the rails while spikes are being driven.



Tie Preservative

The Nox-Rust Chemical Corporation, Chicago, has recently announced a new mastic product named Protek-Tie, which is claimed to increase the service life of crossties approximately one-third. Protek-Tie is of such consistency that it will flow down into cracks and checks, thus keeping weather, brine drippings, mild acids and other deteriorating factors from prematurely breaking down the structure of the tie. No aggregate is said to be necessary when using Protek-Tie.

Protek-Tie is applied to ties with spraying equipment which permits coverage of approximately one tie per minute. Normal coverage of this material is approximately three ties per gallon, depending on the condition of the ties at the time of application.



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The valuable perishables which modern refrigerator cars carry are fully protected against sudden and extreme temperature changes by efficient Streamlite Hairinsul.

Leading refrigerator car builders have been specifying all-hair insulation for nearly half a century—and they find today that Streamlite Hairinsul, with its 40% less weight, is the most efficient and economical.

Streamlite Hairinsul assures you all the advantages given at the right—and more besides. Write for complete data.

1 LOW CONDUCTIVITY. Thoroughly washed and sterilized, all-hair heat barrier. Rated conductivity—.25 btu per square foot, per hour, per degree F., per inch thick.

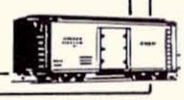
2 LIGHT WEIGHT. Advanced processing methods reduce weight of STREAMLITE HAIRINSUL by 40%.

3 PERMANENT. Does not disintegrate when wet, resists absorption. Will not shake down, is fire-resistant and odorless.

4 EASY TO INSTALL. Blankets may be applied to car wall in one piece, from sill to plate and from one side door to the other. Self-supporting in wall sections between fasteners.

5 COMPLETE RANGE. STREAMLITE HAIRINSUL is available ½" to 4" thick, up to 127" wide. Stitched on 5" or 10" centers between two layers of reinforced asphalt laminated paper. Other weights and facings are available.

6 HIGH SALVAGE VALUE. The all-hair content does not deteriorate with age; therefor has high salvage value. No other type of insulation offers a comparable saving.



Dept. H-23, Merchandise Mart, Chicago 54, Ill.

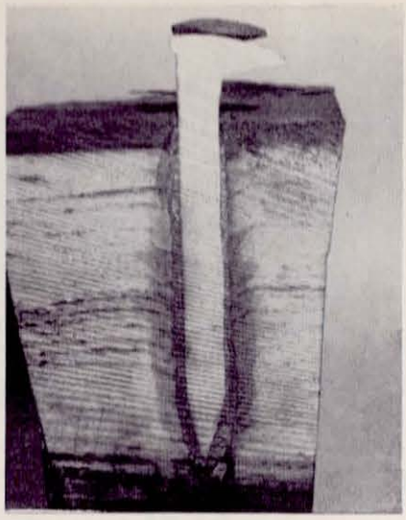
ings. The stablizer bar, in turn, connects to the truck frame through linkage, which permits only relatively vertical forces to be transmitted to it. Hence the entire weight of the front end of the tractor and the dozer goes into the truck frame at the same location as the conventional spring load.

Track-Tool Transporter

The Woolery Machine Company, Minneapolis, has recently announced the availability of the Model 3T Track Tool Transporter. This device has a 4-ft. by 5-ft. weatherproof plywood deck backed with corrugated steel, which is supported on a four-piece tubular steel frame mounted on four 6-in. insulated wheels. The unit has a tubular steel push handle which may be attached at either end of the car. It is said that the entire unit may be easily set up or dismantled in less than a minute for easy loading on a truck or motor car. Although it weighs only 160 lb., the Model 3T is said to be capable of carrying up to 1,000 lb. of tools and materials.

Improved Dump Units

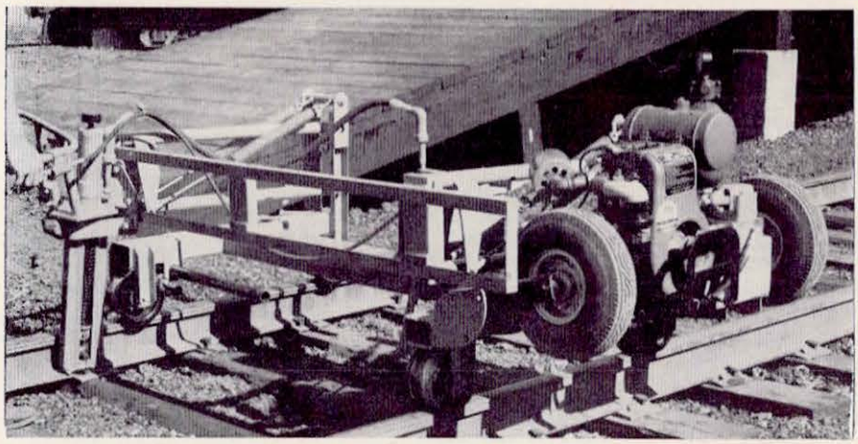
The Brice Hayes Company, Chicago, manufacturers of the Converto railroad dump unit, has incorporated several design improvements in the device. Especially notable are the lifting handles secured to the sides of the body and the new trip-gate mechanism which permits "remote-control" dumping. Other improvements include a new locking catch, new stake pockets, new pump mounting, and new tail-gate design. The entire unit has been streamlined to provide a neat appearance and facilitate handling and operation.



Spiking Compound

The Master Builders Company, Cleveland, has produced a material known as a Spike-Grip for use in spike holes that have become enlarged in ties so that they no longer hold the spikes or permit maintaining proper gage. This material, similar to the manufacturer's Rust Joint Iron, is ground iron combined with chemicals and is applied in dry form into the enlarged spike hole in lieu of a tie plug. Water is then added and the track spike is driven. The driving of the spike forces the Spike-Grip against the sidewalls of the hole while the water in contact with the iron increases the spike holding power.

Three to five ounces of Spike-Grip are required on the average for each spike hole, or the equivalent of one pound of the material for four or five spikes. The material is available in 100-lb. drums or cloth bags. The company has perfected a simple dispenser for applying Spike-Grip in the spike holes and suggests that it can be made very easily in railroad shops.



Spike Puller

Recently announced by Fairmont Railway Motors, Inc., Fairmont, Minn., is a new hydraulic spike puller. Only one man is required to operate this unit, and, because of the weight distribution, one man can remove it from the track. To aid in set-offs and re-railing, there are two hinged pneumatic set-off wheels and self-storing lift pipes.

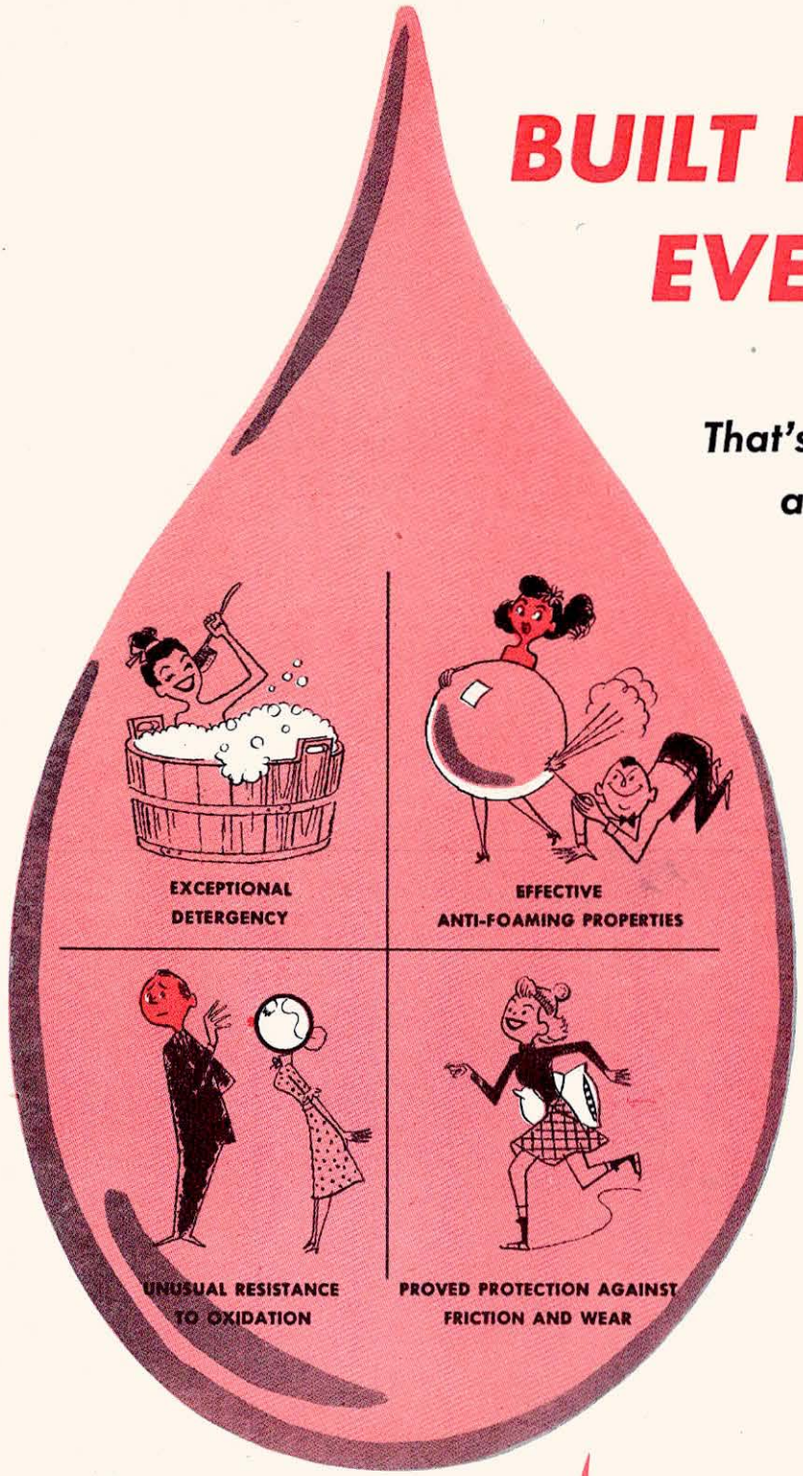
Construction is such that the pulling assembly takes all the load. The guides for the puller jaws act as legs and support the hydraulic cylinder. The pulling assembly has a ball-and-socket mounting to permit some variation in order to locate the jaws properly over the spike. Puller mounting has sealed-for-life ball-bearing grooved wheels operating on a transverse alloy-steel track. This allows the unit to pull spikes from either rail while traveling in one direction. Pulling assembly is merely shifted from one end of the supporting track to the other.

For easier operation the pulling assembly, mounting and track are supported by spring counter-balanced pantograph arms, and little effort is required to raise or lower the assembly, or to shift from one rail to the other. A single-cylinder air-cooled engine is direct connected to the gear type, self-lubricating pressure pump by a flexible coupling. The hydraulic system features an unloading valve for longer pump life, and a precharged bladder-type pressure accumulator to give faster action. This spike puller, known as the W84 series A, is intended for use by tie-renewal gangs. It can also be used in other work where operating economy can be effected by a machine having a pulling capacity of 8 to 12 spikes per minute.

Rail-End Quencher

For quenching the rails during end-hardening work in the field, the Northwestern Motor Company, Eau Claire, Wis., has developed a lightweight, portable, engine-driven high-velocity blower. This blower is said to avoid producing a martensite structure in the rails by providing quenching air through a short hose and specially designed nozzle which, when clipped to the rail ball, distributes the cooling air over the rail ends. The nozzle is shaped to give the greatest hardness at the extreme rail end, with the hardness decreasing away from the end. The blower is said to produce a hardness of 340 to 375 Brinnell. Known as the Northwestern Type CM Rail Quencher, this blower can be carried by hand, or placed on a push car or rail dolly.

BUILT INTO EVERY DROP!



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Yes, today's Gargoyle Diesel lubricating oils embody every known property necessary to keep your Diesels running at peak efficiency!

We worked closely with builders and operators for many years to develop these oils—conducting endless laboratory tests, making exhaustive field evaluations, constantly exchanging findings. The result is Diesel lubricating oils that are giving outstanding performance on major roads from coast to coast!

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Railroad Lubricants

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Correct Lubrication

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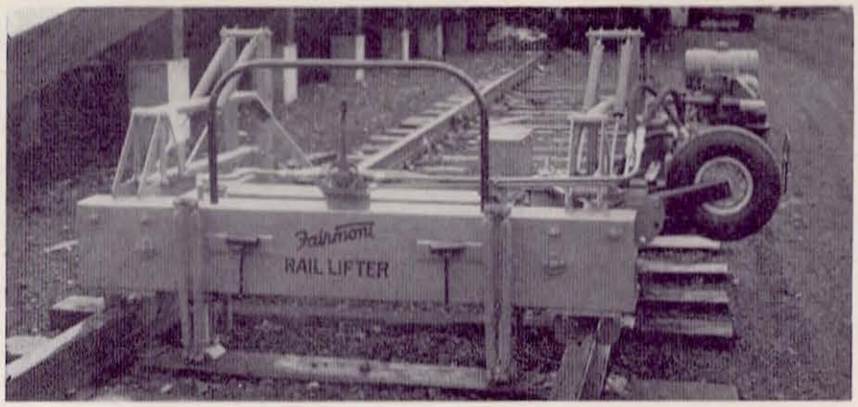
SOCONY-VACUUM OIL COMPANY, INC., RAILROAD DIVISION, 26 Broadway, New York 4, N. Y.

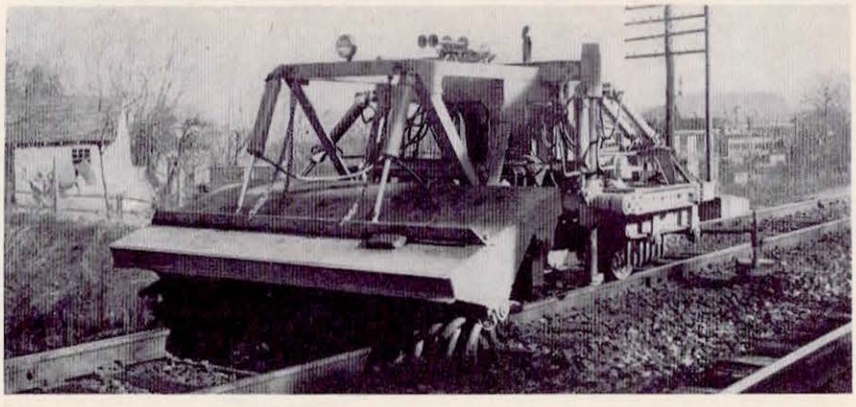


Rail Lifter

The W86 Series A hydraulic rail lifter for removing and inserting tie plates has recently been made available by Fairmont Railway Motors, Inc., Fairmont, Minn.

The actual lifting mechanism of this machine is incorporated in a semi-enclosed beam mounted on pantograph arms. These arms are spring counterbalanced so that the lifting beam can be raised or lowered with a minimum of effort. Mounted on the beam are two single-acting hydraulic rams, the control valve, a rail-clamp lever, and rail clamps. The linkage for these clamps is such that the greater the pull the tighter they grip the rail. The supporting frame or chassis is of welded construction and has four alloy cast-steel rail wheels that turn on sealed-for-life ball bearings. Also on this chassis are the engine and direct-driven hydraulic pump unloading valve, pneumatic set-off wheels, and self-storing extension lift pipes.

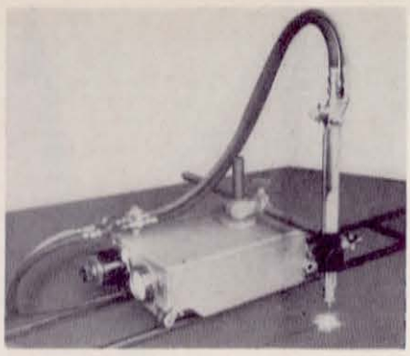
In operation the machine is placed over the tie from which the tie plates are to be removed. Then the lifting beam is moved down against the rail and the clamp control lever shifted to the engaged position. Opening the hydraulic control causes the two rams to push down against the tie. This forces the lifting beam upward, and since the rail clamps hold the rail to the lifting beam, the rails are also raised. Tie plates can then be removed or inserted as desired. When the pneumatic wheels are in the lower position and the lift pipes are extended, it is relatively easy for two men to remove the machine from the track.



Track Dresser

The Pullman-Standard Car Manufacturing Company, Chicago, has announced the Pullman-Standard Power Track Dresser, a machine which is said to be capable of performing all track dressing operations. It sweeps ballast from the ties, establishes a toe line, picks up and relocates excess ballast where desired, and shapes the ballast of both shoulders to the desired contour.

Powered by a 35-hp. gasoline engine, this machine is operated by one man who has finger-touch control of all the machine functions. It is designed to match the hourly track-dressing output of the eight to ten laborers usually assigned to this type of work following a production tamping operation. The work-speed of the unit is approximately ¾ m.p.h. A running speed of approximately 25 m.p.h., and a power set-off mechanism facilitate its use in single-track territory, and enable maximum use of available track time.



Portable Gas Cutting Machine

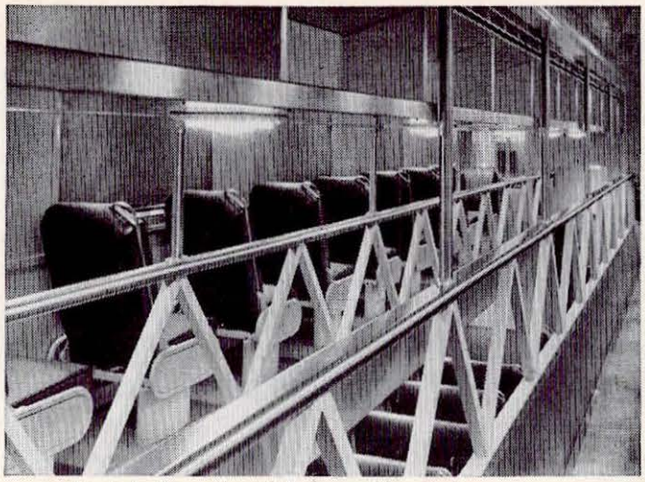
The No. 20 Radiagraph, manufactured by the Air Reduction Sales Company, New York, is the latest addition to Airco's line of portable gas cutting machines. This device is a portable, motor-driven, track-guided machine, possessing the advantages of a travelling carriage for carrying the cutting equipment past the work. When equipped with the proper accessories, it may be employed for circular and irregular shape cutting. All operating controls are conveniently located, and any required speed within the range of the machine can be set by finger-tip adjustment of the indexed speed control on the governor-controlled, variable-speed motor. Travel speed can be increased to as high as 60 in. per min., or decreased to as low as 2 in. per min., while cutting is in progress.

The No. 20 Radiagraph weighs 57 lb., without accessories, and can be readily carried to the work by one man. When properly equipped, the machine can be used for cutting straight lines, circles, arcs, and irregular shapes, with either square or beveled edges.

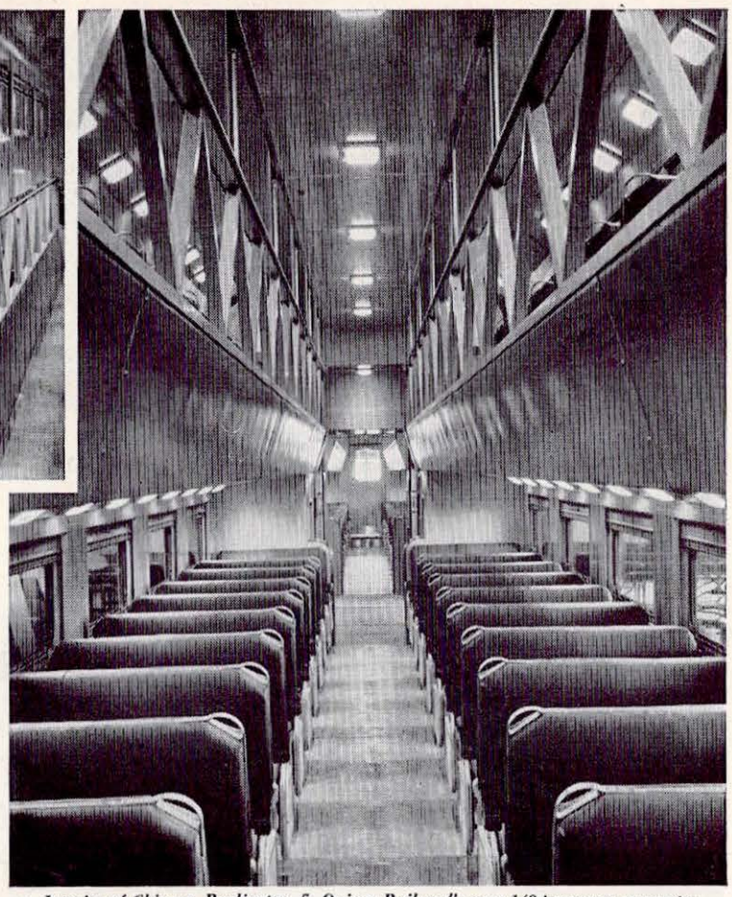
As a traveling carriage, the machine is recommended by the manufacturer for carrying such equipment as the Aircomatic machine, the Heliweld machine holder and filler wire feeder, and a flame hardening torch.

Large Portable Air Compressor

A new 600-cu. ft.-per-min. portable air compressor mounted on rubber-tired wheels has recently been announ-



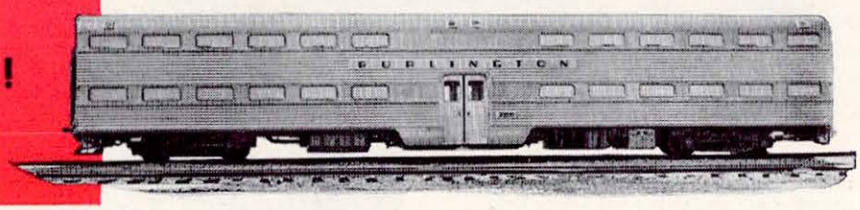
● *Closeup of gallery section which accommodates extra passengers*



● *Interior of Chicago, Burlington & Quincy Railroad's new 148-passenger commuter cars into service this year*

Pittsburgh LAVAX ENAMELS

beautify and protect Burlington Lines' new Gallery Cars!



THE INTERIORS of the Burlington Lines' new 148-passenger gallery cars are one more example how Pittsburgh Railway Finishes meet the demands of advancements in rail transportation.

● **Thirty of these** new and unusual cars, which have caused considerable comment in railway circles, are used in commuter service on Burlington's Chicago-Aurora run. They are called upon to carry a large number of passengers daily.

● **As this kind** of operation subjects the interiors of these cars to unusual wear and tear they were finished with Pittsburgh Lavax Enamels to provide the utmost in protection as well as in smart appearance.

● **This is just another instance** of the growing recognition among those who operate and maintain this country's vital rail transportation that Pittsburgh provides the most satisfactory finishes money can buy for every railway need.

● **Why not avail yourself** of Pittsburgh's vast and long experience in this field? We'll gladly discuss your problems with you at your convenience.

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Industrial Paint Division, Pittsburgh, Pa.

Factories: Milwaukee, Wis.; Newark, N.J.; Springdale, Pa.; Houston, Texas; Los Angeles, Calif.; Portland, Ore. Ditzler Color Div., Detroit, Mich. The Thresher Paint & Varnish Co., Dayton, Ohio. Forbes Finishes Div., Cleveland, Ohio. M. B. Suydam Div., Pittsburgh, Pa.

Pittsburgh provides a high-quality finish for every railway need

CARHIDE—for wood and metal freight cars of all types.

LAVAX SYNTHETIC ENAMELS—for locomotive and passenger cars.

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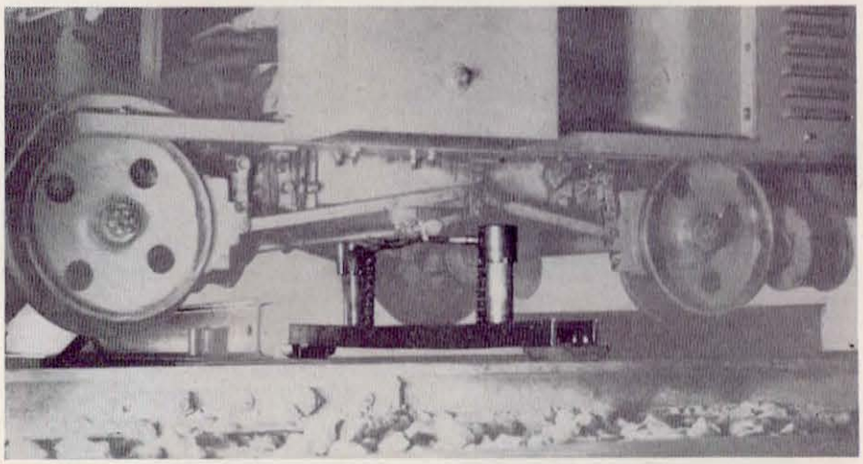
ced by the Ingersoll-Rand Company, New York. Named the Gyro-Flow 600, this machine is said by the manufacturer to be relatively small and light in weight for its size.

The Gyro-Flow 600 incorporates a new rotary compressor, containing no valves, pistons or clutch, which is driven by a General Motors Series 71 diesel engine. Some of the outstanding features of this machine, as pointed out by the manufacturer, are: Two-stage compression with oil-injection cooling; air discharge temperature of below 200 deg.; separate cooling systems for the engine and the compressor; Air-Glide capacity control, which maintains the output of 600 cu.ft. per min. at 100 p.s.i.; and hinged side covers on a heavy metal housing.

The Simplex No. 80 tie remover shown in operation.

The Simplex No. 82 tie replacer inserting a tie.



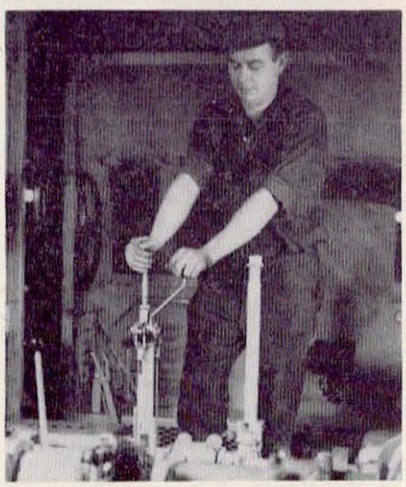
The new hydraulic set-off lift in the raised position. Note that set-off rails are in place under the set-off rollers.

Improved Tamper

As announced recently by the Electric Tamper & Equipment Co., Ludington, Mich., two important improvements have been incorporated in the Jackson Multiple Tamper—a hydraulically actuated indexer for moving the machine from tie to tie, and a hydraulic set-off.

The indexer provides instantaneous forward and reverse action with positive braking. A single control lever regulates this movement and, since high speed and quick stops are assured, a time saving is effected. For emergency and special use, the hand wheel for manually moving the Multiple Tamper from tie to tie has been retained, although the wheel is not mounted on its vertical shaft when the hydraulic indexer is in use. It is said to be a simple matter, however, to use the manual indexing feature.

The hydraulic set-off lift has a tripoint, three-ram lift. With this device the operator can raise the Multiple Tamper off the track in 3 seconds or less by actuating a valve at the control stand. Then two men can quickly position the set-off rails under the set-off rollers. The machine is then lowered by the operator to engage the rails, and the Multiple Tamper pushed onto the set-off.



With the new indexing feature the movement of the machine from tie to tie and its accurate spotting are controlled by two levers.

Tie Inserter-Remover

Templeton, Kenly & Co., Chicago, has announced the production of two new tools designed to facilitate tie-renewal work. One is for removing old ties; the companion tool is a tie replacer for inserting new ones. Each tool consists essentially of a manually operated jacking mechanism which, when hooked to a rail, exerts horizontal power through a long-toothed rack bar.

The manufacturer explains that tie-handling with these devices is twice as fast as with pick and tongs, in addition to being considerably safer. It is also said that, with these tools, one-fourth the amount of ballast is handled as compared with hand methods.

Operation of the tie remover calls for only three steps: (1) Tie plates are removed; (2) ballast is loosened at both ends of the tie and removed at the pushing end to a depth flush with the bottom of the tie; and (3) the tie remover's rail grip is hooked over the top of the rail and the pushing head of the rack bar is placed against the tie end. The tie is then jacked out.

The tie replacer is used by placing the new tie partly under the first rail in the cavity left by the old tie. A hook on the end of the rack bar is placed over the rail and the new tie is pushed into place by the tie-replacer housing traveling along the rack bar.

Portability of both devices is made easy by a roller on the end of each unit which fits over the rail so the unit can be rolled along the rail top. The tie remover, known as Simplex No. 80, weighs 62 lb. and has an overall length of 98 in. with a travel of 80½ in. The tie replacer, known as Simplex No. 82, weighs 60 lb. and has an overall length of 116 in., with a travel of 86 in.

New Air Drills

The Chicago Pneumatic Tool Company, New York, has placed on the market two drills which permit one-hand operation in overhead or "awkward spot" jobs. One unit, known as

RUST-OLEUM Protects Metal...

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In All Colors, Aluminum and White

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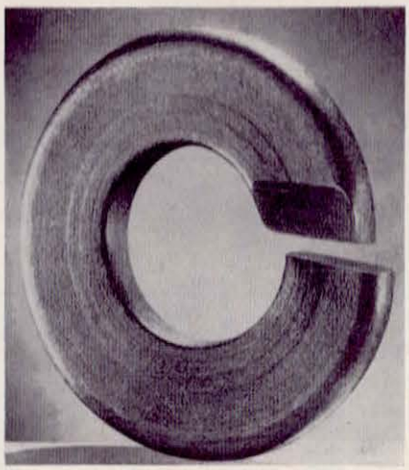
STOPS RUST!

Stopping Rust with RUST-OLEUM 769 D.P. Red Primer

The Handrils are particularly useful on overhead jobs.

the CP-9 Handril, weighs only 7½ lb. and is intended for drilling holes up to 1¼ in. in diameter. It is equipped with an Ajax "quick change" chuck which speeds up drill changes and holds rotating drill steels, non-rotating chisels, and moil points, while adapters are available for "A" and "B" taper-shank star drills. The other unit, known as the CP-14 Handril, weighs 14 lb. and is for drilling holes up to 1¾ in.

Air consumption for both units is reported to be relatively low. These tools are said to be especially desirable for speeding up machinery installation and anchoring jobs, as well as for light demolition, chipping and scaling operations on bridge and building work. The units have self-rotation which eliminates hand rotating of drill bits.



New Frog Washers

The Reliance Division of the Eaton Manufacturing Company, Massillon, Ohio, has announced a new spring washer, especially designed to maintain tight bolts on frogs and crossings and to provide adequate protection from looseness resulting from wear. This Frog and Crossing Hy-Crome Spring Washer is helical in form, will flatten at a sufficient predetermined applied load, and is reported to have a wide range of reaction and adequate pressure for providing tension pending maintenance tightening. It is designed to provide the nut with the necessary bearing surface, while its ground deflected ends are said to make reapplication possible without damaging the contacting parts. This new washer is available for 1⅛-in., 1¼-in., 1⅜-in. and 1½-in. (thread diameter) bolts.

Rail Joint Lubricant

The Texas Company, New York, has announced, after extensive research and laboratory and field testing, a new rust-preventing lubricant for use at rail joints. This product, known as Texaco Rail Joint Lubricant, which is designed for spray application, regardless of moisture conditions, to rail joints for minimizing the hazards of rail misalinement and failure of signal systems due to frozen joints, is a blend of high-quality straight mineral oil and a special additive. The additive is said to impart unusual adhesiveness.

Field tests conducted for over a year on a major railroad showed, it is reported, that the new lubricant (1) is sufficiently fluid under normal atmospheric conditions to be applied by spraying; (2) adheres strongly to the metal surfaces to form a rust-preventing film which remains pliable even at sub-zero temperatures, but will not evaporate in hot weather; (3) provides (*Continued on page* 60)

Fiber Tube Concrete Form

The Sonoco Products Company, Hartsville, S.C., has recently developed a laminated fiber tube for one-time use as a form for concrete, adaptable to the construction of piers, columns, piles, culverts, etc. Called the Sonotube, this form is available in diameters from 3 to 24 in. and in lengths up to 25 ft. In addition to its light weight, it is said to be low in cost as compared with conventional forms and of sufficient strength to resist the effect of vibrators.

The Sonotube is stated by the manufacturer to be particularly adaptable to installations in close quarters and easily cut to any desired length with a hand saw and set in place by one man. With a minimum of bracing, this form will receive concrete directly from a mixer or crane bucket without rising when the concrete is poured into it.

Being spirally wound and specially treated, the forms may be easily stripped after the concrete has set. One method of stripping, as suggested by the manufacturer, is to tape or otherwise secure a length of 0.032 or similar spring wire to the inner surface of the tube prior to pouring. Then, after the concrete has set, the form is split into two sections by merely pulling the wire down. Likewise, any sharp instrument, such as a linoleum knife or hatchet, may be employed to split the tube to aid in its removal.

When used in the construction of reinforced concrete piers or columns, the form need only be placed over the spiral or vertical reinforcing metal attached to the steel support already embedded in the footing. After bracing to the extent necessary to plumb the tube, concrete may be poured into the tube in the conventional manner. Columns ranging from 10 to 30 ft. in height, poured in sections and subjected to heavy loads, have been constructed in this manner.

Concrete caps can be added and bolts and steel beams for bracing can be set in place either prior to pouring or before concrete has set.

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- **Model 10 Automatic Signals cost only a fraction as much as grade separation, yet they provide comparable protection. Unlike grade separation, Model 10's offer an *immediate* solution to the safety problem.**
- **Model 10 Automatic Signals expedite the fast flow of traffic on both rail and highway. In numerous cases, faster train speeds have been authorized at Model 10 protected crossings.**
- **Model 10 Automatic Signals guard busy crossings on nearly a hundred railroads. In the United States and in foreign countries, they're *first choice* of traffic experts seeking maximum protection at minimum cost.**
- **Model 10 Automatic Signals are *never off duty*. So reliable is their life saving performance, that NOT ONE accident has ever occurred as a result of operative failure on the part of these signals.**

Model 10

AUTOMATIC GRADE CROSSING SIGNALS
PRODUCT OF
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LEADING MANUFACTURER OF GRADE CROSSING SAFETY DEVICES—MAKER OF RAILWAY SIGNALING ACCESSORIES

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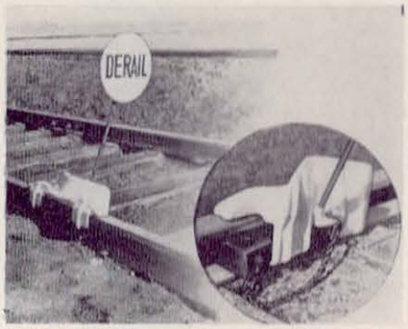
Meet us in Chicago, Illinois
March 10th through March 13th
and see our display at the Coliseum
BOOTHS 118 - 119 - 120

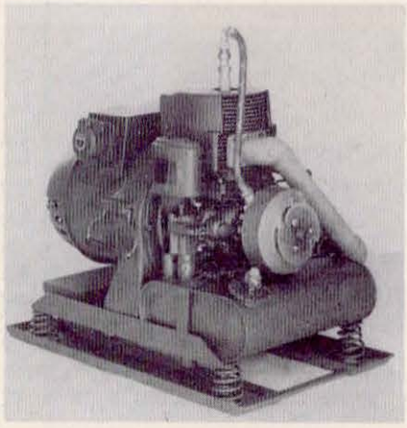
U. S. Pat. Nos. 2,137,196; 2,362,710; 2,372,579. Pat'd. in Canada, 6-27-39.

(*Continued from page* 58)
continuous lubrication due to its permenently fluid state; and (4) is relatively unaffected by prolonged and violent water washing.



Portable Derail

The Nolan Company, Bowerston, Ohio, recommends a portable derail unit for temporary derailing service wherever workers may be endangered by wild cars, cars being switched, or uncontrolled and unsuspected car movements in yards, on spurs, etc. Derailment may be accomplished in either direction, on the right or left-hand rail. It is claimed that no spiking is necessary since a wedge construction securely locks the derail to the rail.



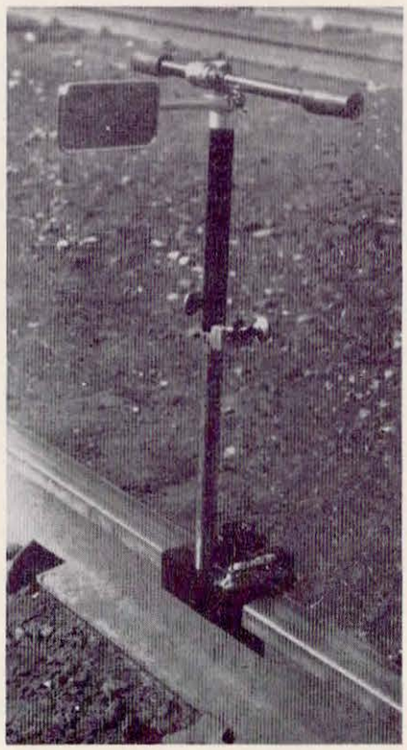
High-Cycle Generator Unit

A new dual purpose, high-cycle generator, designated Model 24HY-1, has recently been introduced by the Homelight Corporation, Port Chester, N.Y. This generator provides high-cycle alternating current for the operation of electric tools, as well as direct current for floodlighting and the operation of universal tools. The unit is powered by a one-cylinder, air-cooled, two-cycle gasoline engine, which is said to operate for 1¾ hours on a gallon of fuel at full load. It develops 2,500 watts of 180-cycle, 3-phase, 230-volt alternating current, as well as 2,500 watts of 110-volt direct current. Outstanding features of this generator include large-sized carbon brushes, specially treated armature and field coils, and "V" ring commutator construction. Weighing 125 lb., the generator unit is 25 in. long, 18 in. wide, and 20 in. in length.

Electric Chain Saw

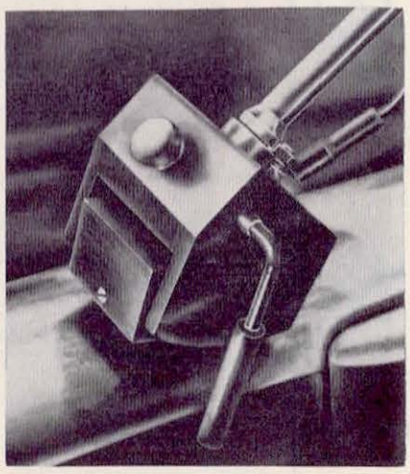
The Mall Tool Company, Chicago, has designed a new type electric chain saw, Model 11E18, for cutting heavy building timbers too large for circular saws. Weighing under 20 lb., it is light enough for one-hand use, although a helper's handle can also be attached so that two men may saw sharp angles with ease.

The new saw has a thin chain guide and a narrow special-toothed chain for producing extremely smooth and precise finish cuts. The cutting bar is 18 in. long. Models are available for either 115 or 230-volt a. c.-d.c. current. The saws are said to operate efficiently from a portable generator, and can be run over 200 ft. from their power source with extension cords.



Lining Scope

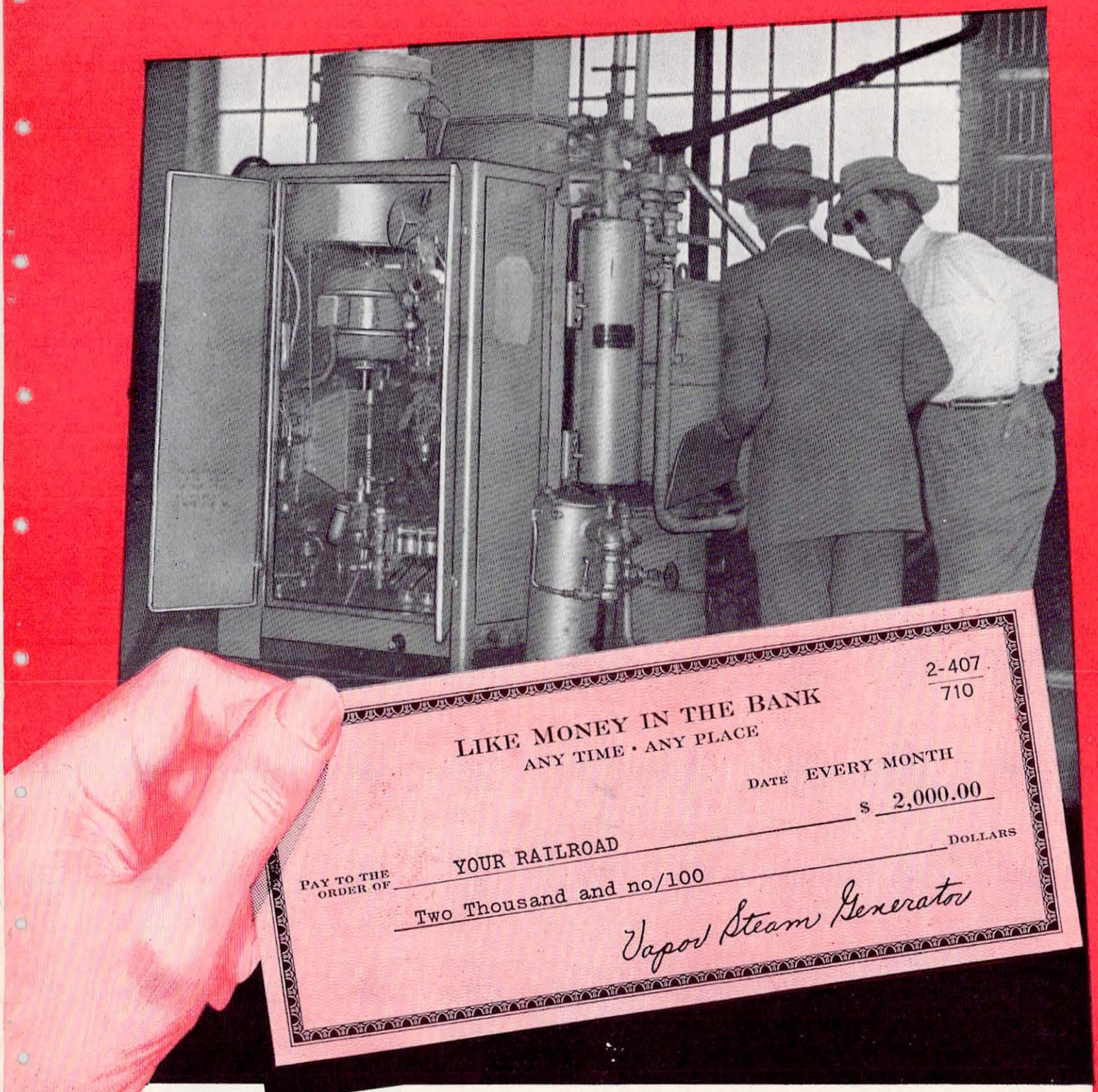
The Brice Hayes Company, Chicago, has made available the Hayes Lining Scope, which consists of a collapsible, mounted 6-power telescope, protected at the ends with Neoprene rubber tubes. It enables the operator to aline track for distances up to 500 ft. without moving the scope. A rear-view mirror is mounted at the left of the telescope as a safety factor for the operator. A vernier adjustment near the middle of the staff permits accurate alinement, and adjustments for height are made by a thumb screw on the left-hand side of the staff just above the vernier. The collapsed scope can easily be removed from the rail.



Improved Rail Flaw Detector

Branson Instruments, Inc., Stamford, Conn., has announced that searching units used with the portable Audigage rail-flaw detector can now be protected from mechanical wear with quartz wear plates. These plates are presently being installed by the manufacturer on both long-handled and hand searching units. Testing speed is said to be substantially increased since the protected searching unit can be slid over continuous sections of track in grade crossings, tunnels, station platforms, and other critical locations. Old type

(*Continued on page* 62)



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VAPOR Steam Generators deliver steam in less than 2 minutes from a cold start; modulate from full fire down to zero steam load without cycling on-and-off, as do other types of steam generators. This assures a steady fire at any steam load, prevents excessive wear and tear on controls.

During winter months, this VAPOR Steam Generator operates twenty-four hours a day The steam is used to heat several buildings including oil-house office, car department office, and master mechanic's office; for set-out heating of office and passenger cars; for steam-cleaning engine filters and tank cars; and for locker-room hot water.

Such performance is typical of the savings versatile VAPOR Steam Generators make possible. Already in use on 90% of America's Diesel-operated trains, this unique method of steam generation is equally outstanding for laundries, pile drivers, construction projects, and wherever else steam is needed. Write for full information.

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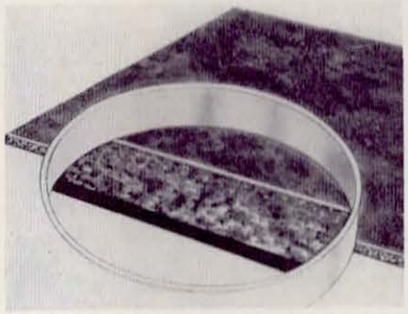
(*Continued from page* 60)
searching units with plastic wear plates can be returned to the manufacturer for installation of the quartz wear plates.



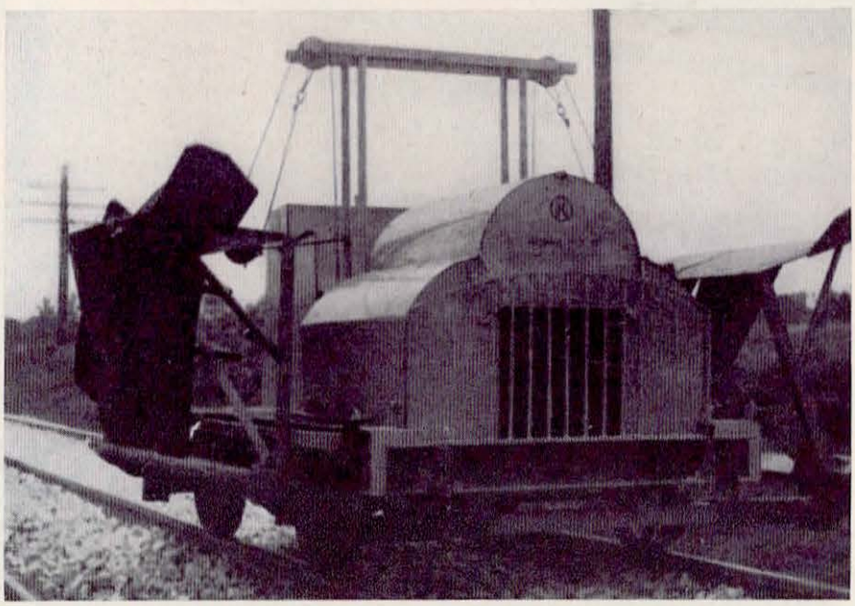
Tie Pads With Sealing Compound

The Fabreeka Products Company, Boston, has introduced a new Fabco self-sealing tie pad, using the same materials and construction as Fabco uncoated tie pads with the addition of a special sealing compound applied to that side of the pad in contact with the tie. This sealer, applied prior to shipment, is 1/16 in. thick and is protected during storage and shipping by a temporary coating of powdered mica. The manufacturer states that the sealing compound used provides an excellent bond between the tie and the pad, which effectively seals out all dirt and moisture. Since these pads are coated only on the side next to the tie, movement of the tie plate is permitted with less disturbance to the tie bond and less deterioration of the pad.

Off-Track Ballast Cleaner

The Railway Maintenance Corporation, Pittsburgh, has recently standardized and improved its McWilliams Super Mole ballast cleaner. The improvements include the introduction of a power-operated adjustment of the head, independent of the body of the machine, which, it is said, permits the leveling of the subgrade independent of the supporting track; and the use of an entirely new principle of hydraulic vibration for the screens. The latter improvement provides means for leveling the main screen and includes a vibrated ballast delivery chute, which is also a screen, thus increasing the screening capacity of the machine an estimated 35 per cent. Numerous small changes facilitate operation and maintenance of the machine.

The McWilliams Super Mole is an off-track, tractor-mounted ballast cleaner, designed to clean shoulder ballast and dispose of excavated material. Diesel-powered, this machine is operated by one man, and can convey waste material to one side or into cars, as desired.

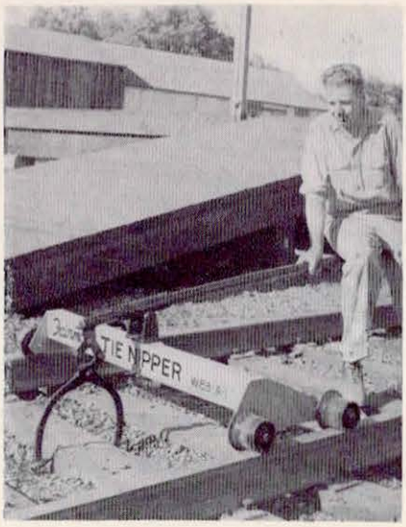


Ballast Regulator And Scarifier

The Kershaw Track Patrol Ballast Regulator and Scarifier has recently been made available by the Kershaw Manufacturing Company, Montgomery, Ala. This machine is used with out-of-face surfacing gangs, and as a track patrol to scarify, deweed, regulate and shape the ballast shoulder. With surfacing gangs, it is used to regulate and distribute the ballast after unloading, and ahead of surfacing. After surfacing is completed, the machine is used to regulate and shape the ballast slope, eliminating the entire crew normally used for this purpose.

Powered by an 85-hp. heavy-duty International GRD-233 engine, the Track Patrol consists of two ½-yd. regulator and dresser wings, complete with scarifying teeth, dresser and plow blades, all mounted on a track car.

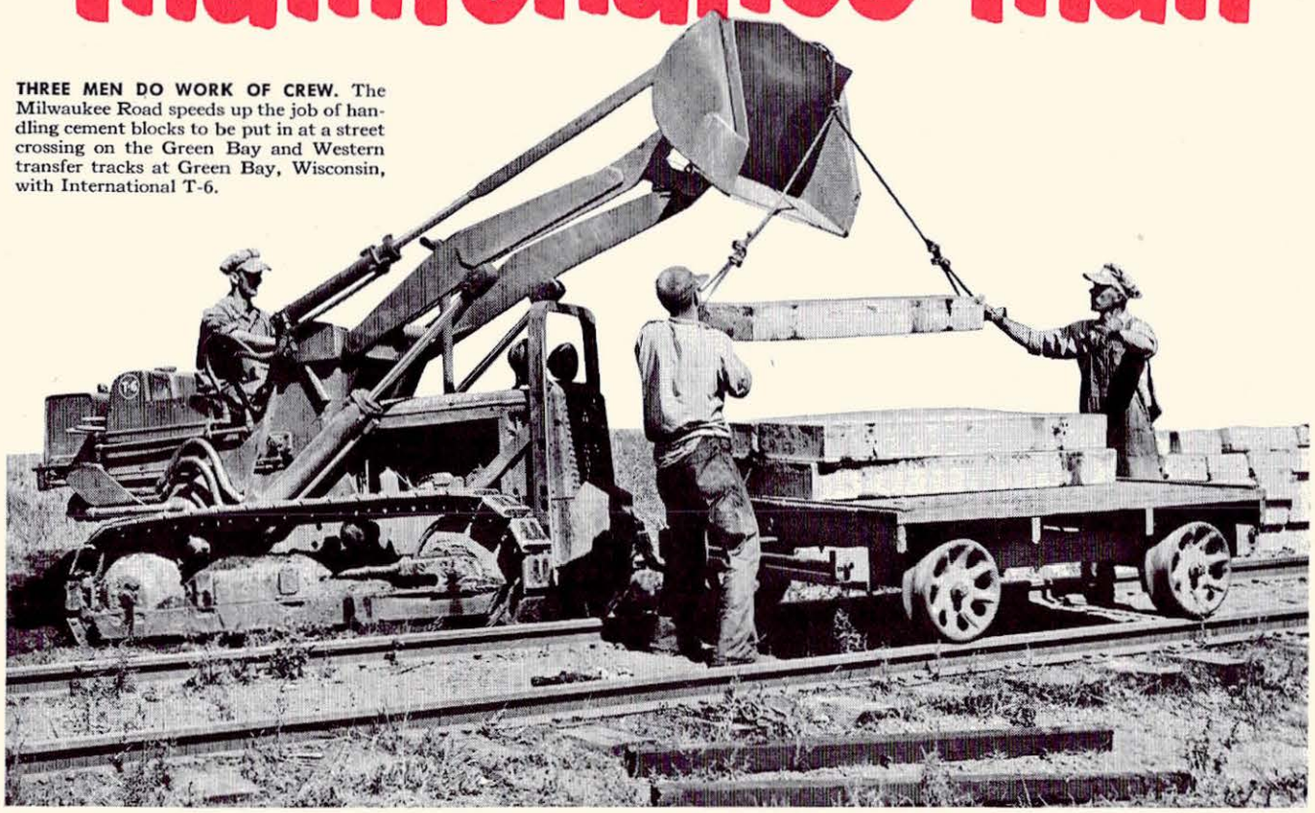
The manufacturer states that on normal maintenance work, the machine, operated by two men, is capable of scarifying, regulating, deweeding, and shaping the ballast on from two to three miles of track per day.



Tie Nipper

Fairmont Railway Motors, Inc., Fairmont, Minn., has announced the W83 Series A Tie Nipper. The unit weighs 130 lb. and has a welded steel frame,

All-round "maintenance man"



THREE MEN DO WORK OF CREW. The Milwaukee Road speeds up the job of handling cement blocks to be put in at a street crossing on the Green Bay and Western transfer tracks at Green Bay, Wisconsin, with International T-6.

Milwaukee Road picks International power because it gets so many things done so fast

The versatile T-6 is an all-round maintenance man for the Milwaukee Road. It is shown here unloading cement blocks, but it also handles ties, loads trucks, moves rail cars, lifts rails, shovels snow and tackles any right-of-way maintenance chore.

Operator Gordon Falk says, *"This T-6 isn't afraid of work. It's always on the job, rarin' to go!"*

When you want to make every maintenance dollar count, get the details on International power from your International Industrial Distributor.

INTERNATIONAL HARVESTER COMPANY, CHICAGO 1, ILL.

INTERNATIONAL — INTERNATIONAL HARVESTER — **POWER THAT PAYS**

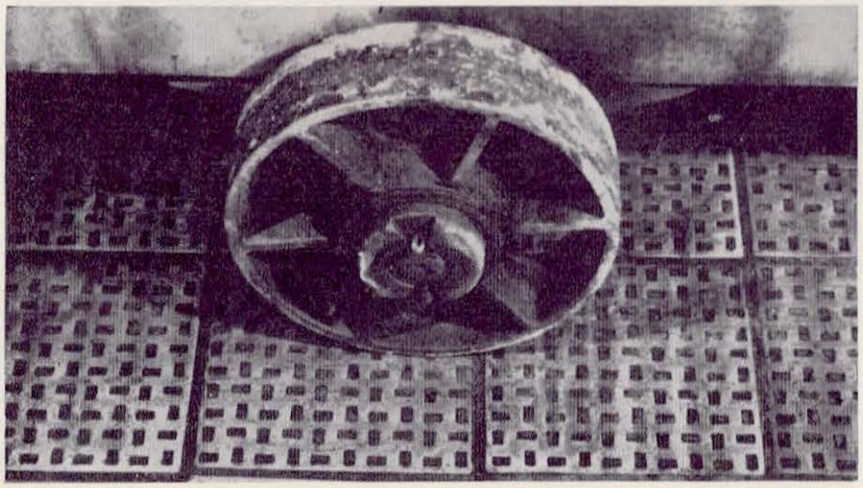
insulated cast alloy steel wheels, and heat-treated cast-steel hooks with renewable heat-treated alloy steel points.

The connecting block for fastening the hook links to the handle is offset. When in use this offset is down and the hooks are in position to grab the tie. Giving the handle a 180-deg. turn brings the offset to the top and holds the hooks up and away from the ties. The workman can then push the unit along the track with the handle at a convenient height.

Mower Attachment

The Oliver Hydro-Cut Mower, formerly called the Hydro-Mower, manufactured by the Oliver Corporation, Cleveland, has recently been improved in design. Some of the changes are: A redesigned flywheel, with a ball-bearing crank pin that requires lubrication but once each season; a Pitman drive; a knife assembly with double back-bar and machined ball; a cast mounting plate assembly; and an improved combination valve and tank assembly.

The new mower may be employed on Oliver industrial tractors in combination with other attachments, such as Ware front-end loaders, Hydro-Brooms, and wheel-tractor dozers.



Steel Floor Plate

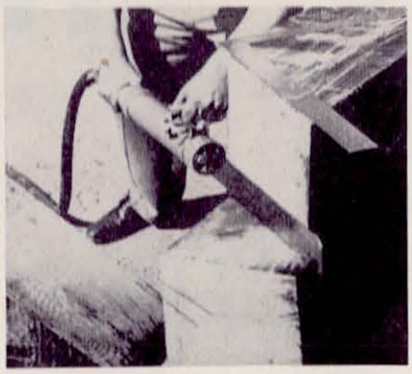
Acme Steel Company, Chicago, announces the availability in limited supply of Floor Plate, which is designed for the reinforcement and protection of concrete floor surfaces subjected to heavy industrial loads and severe punishment. It can be installed without special tools as a new floor surface or over old floors.

Floor plate is made of 0.068-in. hot-rolled steel and comes in 11¾-in. squares. Each plate contains 100 small rectangular holes approximately ½ by ¾ in., and 100 barbed prongs 3/4 in. long, which anchor the plate to the concrete. The four rounded edges of each plate form a flange that becomes imbedded in the concrete and adds rigidity to the plate. The manufacturer asserts that floors protected with Floor Plate are safe, whether wet or dry, because the abrasive characteristics of the exposed concrete provide resistance to slippage and skidding.

For new floors, a dry concrete topping mix is poured over the base slab and screeded and the plates are pressed into the topping until pillows of concrete extrude upward through the holes, after which the plates are leveled with the floor surface and with each other.

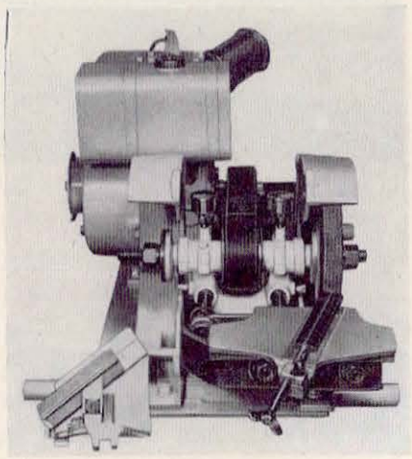
Finishing is accomplished with the edge of a steel trowel or a piece of folded burlap to remove excess concrete.

When installing Floor Plate over old concrete floors, the floor must first be chipped to a depth of approximately two inches and a slush bond coat brushed into the chipped surface before the topping mix is poured. After this, the procedure is the same as that for new floors. When sections of industrial floors must be removed to repair plumbing, steam and electrical lines, clogged sewers, etc., any plate or combination of plates can be removed without disturbing the rest of the floor surface.



Pneumatic Power Saw

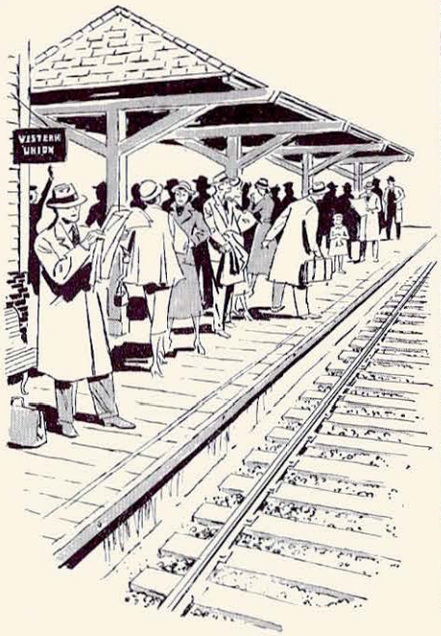
The Wright Power Saw & Tool Corp., Stratford, Conn., has recently improved the Wright Precision Power Saw through standardization of several features. Chrome-plated saw blades with all-steel rivets are now standard on all units. The use of these blades, according to the manufacturer, results in reduced friction which maintains blade sharpness and reduces corrosion. Micarta wear plates have been installed on the pistons with a reduction in friction and increase in power.



Attachment For Drill-Bit Sharpening

An attachment has been developed by the Nordberg Manufacturing Company, Milwaukee, Wis., for sharpening flat-beaded rail drill bits on the Nordberg bit grinder. Designated as Model DA-2, this device is said to fulfill all the requirements for obtaining perfectly sharpened bits. The manufacturer states that, after a few minutes instruction, anyone may sharpen bits with this device and obtain accurate results.

This floor meets the "COMMUTER TEST"



Data on "Terraflex" courtesy Johns-Manville Corp., 22 East 40th St., New York 16, N.Y.

It's a floor to cheer operators and passengers alike—built for years of service, easily cleaned, colorful and modern! It's "Terraflex," a resilient flooring that's made from VINYLITE Brand Resins.

Thousands of commuters track mud, cinders, gravel and grease, down this aisle every month. And maintenance costs *stay low!* The hard, non-porous surface won't need waxing. It remains unharmed even by strong cleaning compounds. It resists water, salt, oil, alkalies, most strong acids!

Flooring materials made from VINYLITE Brand Resins have a flexibility that prevents "lifting" caused by the working of car floors. In tile or continuous flooring, they offer a wider range of brighter, clearer, more stable colors than ever before possible in resilient flooring materials. More attractive designs are possible.

Learn more about floors with the unique qualities of VINYLITE Brand Resins that are so useful to scores of products in defense and industry. Write Dept. MD-73.

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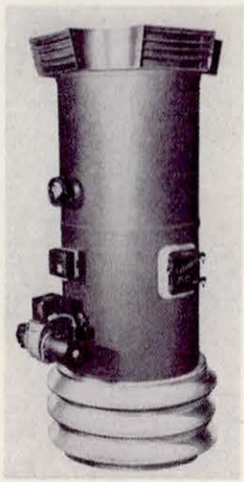
A Division of
Union Carbide and Carbon Corporation
30 East 42nd Street, New York 17, N. Y.

Waterproofing Support

A new product, known as Glasfab, is now being marketed by the Twinsburg-Miller Corporation, Twinsburg, Ohio, for providing roofing and other waterproofing installations with a non-deteriorating support. This material is made of Fiberglas yarn and acts much in the same manner as reinforcing rods in concrete. Its flat fiber structure and open weave construction permit thorough penetration of bitumen so that the glass fibers are completely surrounded and locked in the roof coating, eliminating all possibility of a resulting "sandwich" construction.

The product is designed for waterproofing applications and for protective coverings for new or recovered roofs, masonry and concrete walls, bridge decks, storage tanks, vapor barriers, and underground and overhead piping. Its construction is reported to allow tight application to uneven shapes and contours as well as to simplify its application on corners and other uneven surfaces. It is produced in widths of 2 in. to 45 in. and in rolls of 50 to 500 yd.



Unit Heater

A self-contained, direct-fired heater which may be employed in roundhouses, diesel repair shops, freight stations, and other railroad buildings, has recently been introduced by the Thermobloc Division of the Prat-Daniel Corporation, South Norwalk, Conn. The heater is said to be especially suited for installation in buildings where there is heavy in and out traffic. The unit circulates heated air at working levels and is automatically controlled. The manufacturer states that the unit requires no complicated or expensive piping, duct work or radiator installations, and that it is made ready for operation merely by connecting it with an oil or gas line and electric power. The heater unit is available in either a floor or ceiling-suspended model.

Hydraulic Loader

The Strait-Line Hydraulic Loader, Model 77, for use on the Oliver Industrial "77" wheel tractor, has been announced by the Oliver Corporation, Cleveland, Ohio. This is a double-end loader which can dig either in the front or rear. Dumping is always accomplished in the front and, since the operator is free to select either front or rear digging, he can load without twisting or turning the tractor. Since the load can be carried in the rear, greater rear wheel traction is attained, and front-wheel pressure is diminished to facilitate steering. Whenever the loading bucket is lifted 5 ft. off the ground, the bucket assumes a vertical position which it maintains during its swing over the tractor to the front dumping position. The entire operation of digging and loading is further simplified since the operator uses only two controls.

Among the accessories available for the Strait-Line are a combination bulldozer and angledozer, which can be used without removing the bucket from the loader; a double-end load-spotting crane; and six different loading buckets for various operations.

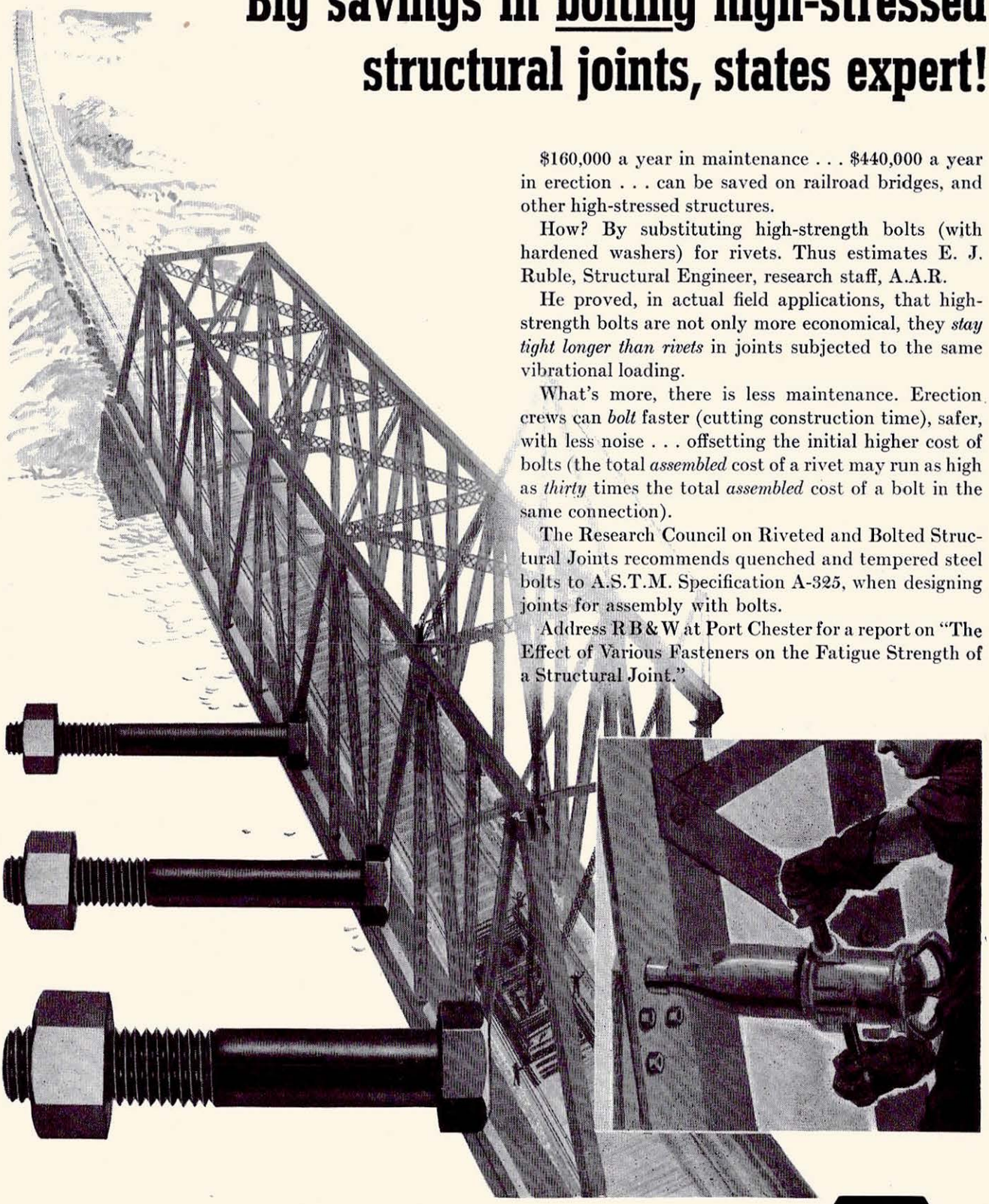
Steel Grating For Highway Crossings

The Condon Steel Grating Crossing, formerly produced by Canisteo Industries, is now being manufactured by the Morrison Railway Supply Corporation, Buffalo, N. Y. This highway crossing which, except for timber guards on each side of the track rails, is entirely of steel construction from one approach to the other, is comprised of a wearing surface of steel grating sections supported on a steel underframe. A feature of this design is that the crossing in no way interferes with normal drainage, since no part of the decking or its supporting underframe is in contact with the ballast.

When surfacing is necessary, the proper sections of decking may be removed by unbolting and lifting them out by hand and then proceeding to tamp the track. For heavier work, such as renewing ties or cleaning ballast, both the decking and the underframe may be removed and replaced later.

The cost of snow removal is reported to be minimized by the fact that much of the snow, except in the flangeways, either falls through the openings in the gratings or is forced through them. The grating surface also provides excellent traction for highway vehicles.

Big savings in bolting high-stressed structural joints, states expert!



$160,000 a year in maintenance . . . $440,000 a year in erection . . . can be saved on railroad bridges, and other high-stressed structures.

How? By substituting high-strength bolts (with hardened washers) for rivets. Thus estimates E. J. Ruble, Structural Engineer, research staff, A.A.R.

He proved, in actual field applications, that high-strength bolts are not only more economical, they *stay tight longer than rivets* in joints subjected to the same vibrational loading.

What's more, there is less maintenance. Erection crews can *bolt* faster (cutting construction time), safer, with less noise . . . offsetting the initial higher cost of bolts (the total *assembled* cost of a rivet may run as high as *thirty* times the total *assembled* cost of a bolt in the same connection).

The Research Council on Riveted and Bolted Structural Joints recommends quenched and tempered steel bolts to A.S.T.M. Specification A-325, when designing joints for assembly with bolts.

Address R B & W at Port Chester for a report on "The Effect of Various Fasteners on the Fatigue Strength of a Structural Joint."

RUSSELL, BURDSALL & WARD BOLT AND NUT COMPANY

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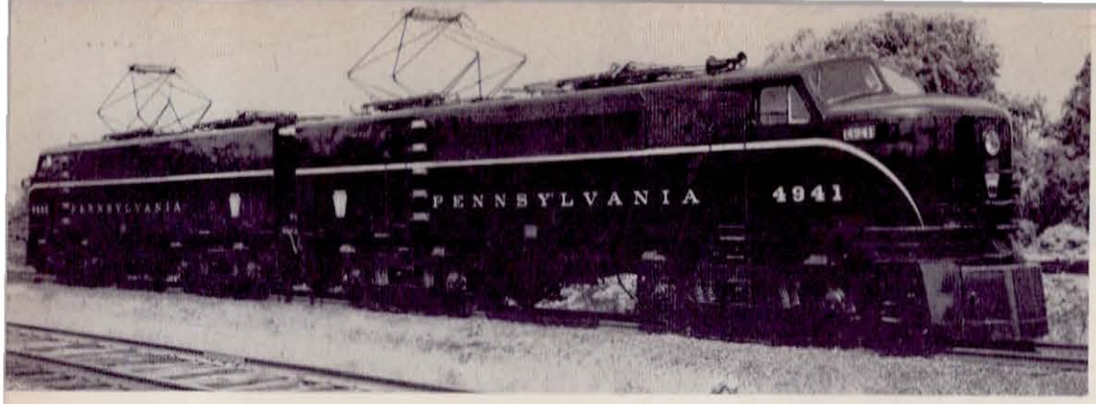
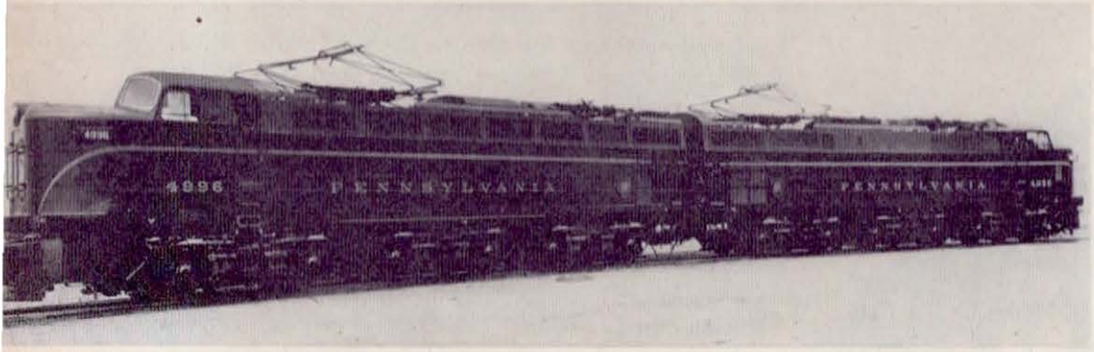
THE COMPLETE QUALITY LINE

Plants at: Port Chester, N. Y., Coraopolis, Pa., Rock Falls, Ill., Los Angeles, Calif. Additional sales offices at: Philadelphia, Detroit, Chicago, Dallas, Oakland. Sales agents at: Portland, Seattle.

107 YEARS MAKING STRONG THE THINGS THAT MAKE AMERICA STRONG





The Pennsylvania's New Electric Freight Locomotives

A Comparison . . .

By S. V. SMITH
Assistant Electrical Engineer
Philadelphia
Pennsylvania Railroad

The Pennsylvania's new electric freight locomotives have been described in two papers, abstracts of which appeared respectively in the January 28 and February 11 issues of Railway Age. *Considerable discussion followed the presentation of these papers to an engineering group, most of it consisting of rival claims of superiority by representatives of the two manufacturers. The following is a statement by a representative of the railroad.*

Four new two-unit electric freight locomotives have been built for the Pennsylvania. Two straight a.c. locomotives were placed in service in June 1951. The first Ignitron-rectifier locomotive was placed in service early in November 1951. Delivery of the second Ignitron-rectifier locomotive was scheduled for the first quarter of this year.

Maximum tonnage ratings have been established in accordance with each manufacturer's recommendations. When ready for service, the first locomotive of each type was assigned a program to haul revenue freight trains with tonnages as close as practicable to recommended maximum ratings between the principal freight terminals in electrified territory. Engineering representatives of the manufacturer and the railroad rode the locomotive throughout this program. Thereafter, the locomotive was pooled with 152 older electric locomotives and assigned in turn to haul freight trains with only such further special technical attention as the manufacturer saw fit to provide.

Maximum tonnage ratings issued for the new locomotives follow the pattern previously developed for older electric locomotives—momentum operation with helpers coupled behind on certain ruling grades. Ratings for the new a.c. locomotives are calculated from design. The rectifier locomotive has been limited to 85 per cent of design ratings. When sufficient operating experience has been obtained, it seems probable that the rectifier locomotives will be assigned full design rating and operated on all ruling grades without help.

With present ratings, no difficulty in handling assigned tonnages on ruling grades has been experienced thus far with any of the new locomotives. Apparently the new a.c. locomotives, as well as the rectifier locomotives, can handle more tonnage than the manufacturer has recommended.

Six Features in Common

All of the new electric freight locomotives have six modern features in common. They are (1) the A-type units; (2) simplified trucks with small driving wheels; (3) permanent fire extinguishing systems; (4) dynamic braking; (5) all weight on drivers; and (6) axle-loading slightly in excess of 60,000 lb. per axle. The value of these features has been proved on modern diesel-electric freight locomotives. All types of electric locomotives previously built in quantity for the Pennsylvania were originally designed for and still operate at times in passenger service. The application of all these features could not be economically justified, even today, on new passenger electric locomotives.

Any one who undertakes to compare different types of locomotives should bear in mind that the maximum tractive force which any locomotive can transmit is mechanically restricted by two related factors. The first is fixed and is the weight on drivers. The second, variable and highly controversial, is the adehesion which can be maintained between the surfaces of the driving wheels and the running rails. In quotations for new locomotives, high adhesion qualities are often quoted, but never guaranteed without restrictions.

Notwithstanding statements to the contrary, the basic

differences between the two new types of locomotives are related to (1) size, (2) type of electrical transmission system, and (3) designed application of electrical transmission system.

The rectifier locomotive, with six driving axles per unit, weighs about 54 per cent more than the a.c. locomotive which has four driving axles per unit. With no other differences, the heavier locomotive would be expected to have proportionately higher tractive force and horsepower ratings. For purposes of technical accuracy and clarity, statements, tabulations, and curves relating to comparative performance and ratings should be confined to locomotives of the same size, to which the same basic mechanical restrictions would apply. In discussions which followed the presentation of the papers, a rectifier locomotive and a diesel-electric locomotive of approximately the same weight appear to have been compared, inadvertently perhaps, with an a.c. locomotive some 200,000 lb. lighter.

The total weight of each rectifier unit is about seven tons less than that of the Pennsylvania's Class P5a electric locomotive, which has 56 per cent of its total weight on drivers. Class P5a locomotives have, for a number of years, operated singly and in combinations of two or three in multiple to haul most of the freight trains in the Pennsylvania's electrified territory.

Insofar as basic components are concerned, the electrical transmission system on the a.c. locomotive follows the pattern of its predecessors. The rectifier locomotive retains the transformer and tap switches, adds Ignitron tubes, and substitutes d.c. traction motors which were already developed for diesel-electric locomotives.

Pertinent characteristics of the transmission systems are indicated by the absence of certain protective features. There are no motor overload relays on the a.c. locomotive and no wheel-slip relays on the rectifier locomotive.

With present tonnage ratings, the a.c. traction motors appear to have sufficient capacity to transmit all the tractive force which the locomotive's adhesive limits will permit. The locomotive will slip before the motors become overloaded. No information on this performance with higher tonnage ratings has been presented.

The locomotive's adhesive limits appear to be effective from starting to 40 m.p.h. on good dry rail and to 50 m.p.h. on properly sanded wet rail. Traction motors appear to be inherently self-protecting at locomotive speeds above 40 m.p.h.

Adhesive Limits

Reduced tonnage ratings which now apply to the rectifier locomotive have afforded little opportunity for a practical demonstration of its adhesive qualities. Preliminary design curves and present motor operating restrictions indicate that some slipping may be experienced on sanded wet rail at speeds below 25 m.p.h. How effective the operation of six traction motors in parallel will be remains to be established. At higher speeds, maximum tractive forces which the d.c. traction motors can transmit appear to be well below conservative estimates of the rectifier locomotive's adhesive limits. At speeds above 40 m.p.h., maximum tractive forces handled by the d.c. motors should not be far below those obtained on the a.c. locomotive.

The potential overload of a.c. traction motors looks most attractive on paper. However, the statement that "full tonnage trains can be hauled at speeds considerably in excess of the continuous-rating speed when necessary to meet operating conditions" applies only to the extent that prevailing adhesive limits of the locomotive are not exceeded.

To date both types of locomotives have indicated that they are capable of hauling freight more efficiently than the older electric locomotives or than a diesel-electric locomotive of comparable size. After proper tonnage ratings and operating restrictions are established, both types will be afforded ample opportunity to prove their conflicting claims of superiority as they work side by side in the same established electric freight service. The lower overall cost per unit of transportation service performed will be convincing proof.

Letters from Our Readers . . .

Car Service Series Praised

DURHAM, N. C.

TO THE EDITOR:

Wish to take this opportunity of telling you how much I enjoyed the article: "How to Secure Best Observance of Car Service Rules," in the February 11 *Railway Age*, by E. W. Coughlin, manager railroad relations, Car Service Division, Association of American Railroads.

At our meeting of freight agents and yardmasters this week, the article was our topic of discussion and it was agreed by all present that more frequent articles like these would go a long way in utilization of freight equipment to the fullest extent.

We are anxiously looking forward to future articles by Mr. Coughlin.

F. E. DICKERSON
Asst. Agent-Yardmaster
Norfolk & Western

SAN FRANCISCO, CAL.

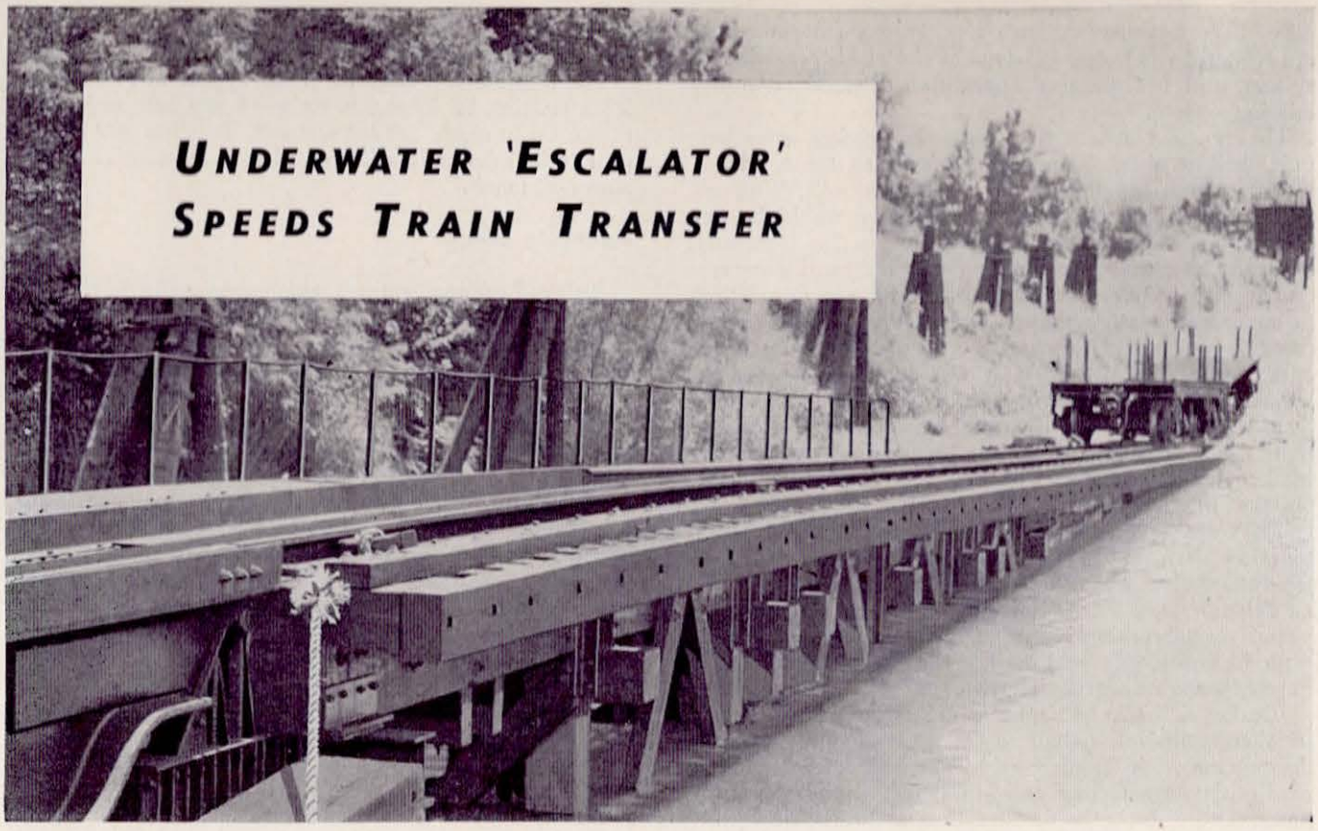
TO THE EDITOR:

I have just read the very fine article in the February 11 *Railway Age* entitled "How to Secure Best Observance of Car Service Rules," by E. W. Coughlin and to say that it is a very fine description of the subject would be putting it mildly. I think it is one of the best I have ever read.

Would it be possible to secure about 60 extra copies of these pages for circulation among a limited number of our people who in turn would recirculate them among others? I am thinking particularly of those who do not have ready access to *Railway Age*.

H. C. MUNSON
Vice-President and General Manager
Western Pacific

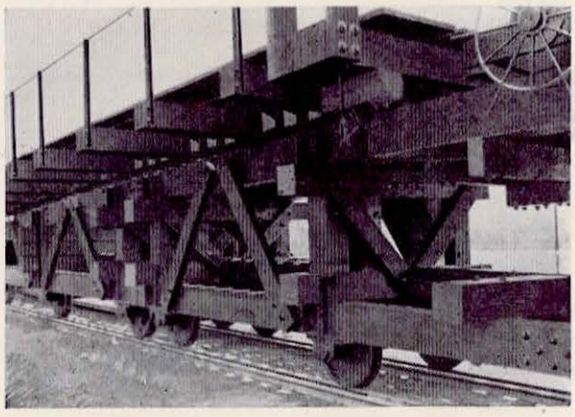
[As we have written Mr. Munson, and Mr. Dickerson, we are "holding type" on Mr. Coughlin's first article, and expect in due course to print the entire series in pamphlet form, if sufficient demand exists for it.—EDITOR]



. . . another unique service by ***Pre-framed*** "Creo-pine" Bridge Timbers

How to transfer loaded freight cars from land to river barge despite varying water levels was the problem faced by the Nashville, Chattanooga & St. Louis Railway at Guntersville, Alabama, on the Tennessee River. For 56 years it has been solved effectively by an ingenious underwater cradle constructed of pre-framed "Creo-pine" bridge timbers. This use of pressure-creosoted timber is only one of many which alert railroad men use to cut installation costs, in many cases up to 50 per cent.

Mill framed, "Creo-pine" timbers are dapped, bored, and sized before treatment, with accuracy not possible in hand-framing. All "Creo-pine" products are pressure creosoted for long life, and shipped ready for use. Write for information on "Creo-pine" bridge timbers. Find out how they can save money for you.



Mounted on carwheels, the cradle can be moved up or down inclined track leading into water, to accommodate fluctuating river levels. Over 200 feet in length, the cradle required 30,000 board feet of "Creo-pine" timber.

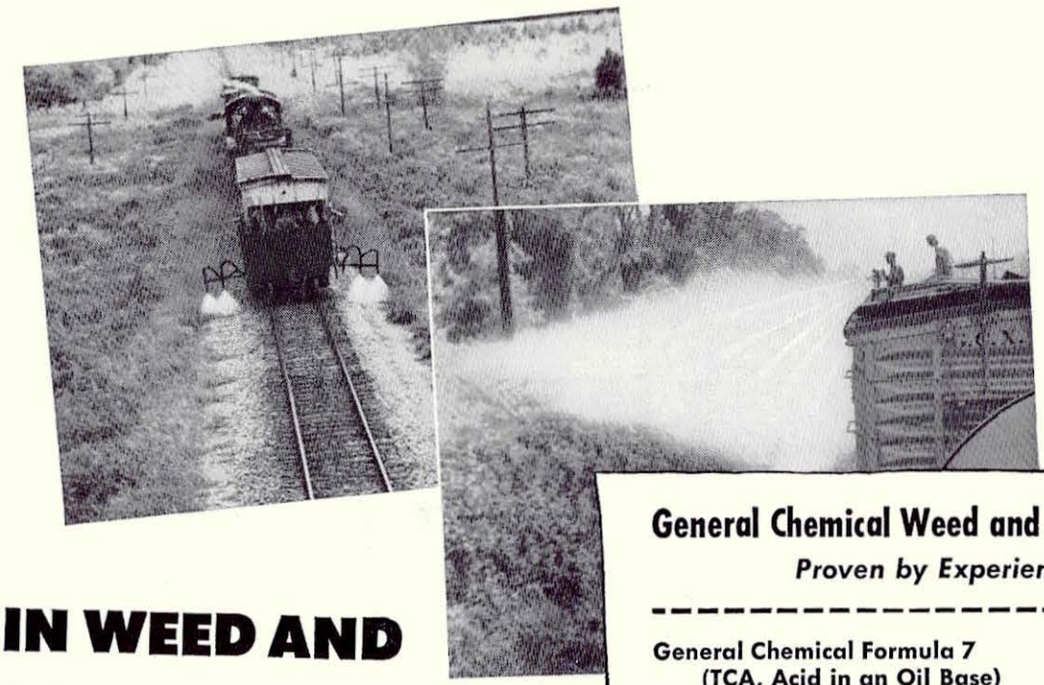
CREO-PINE PRODUCTS

Poles	Cribbing	Cross Ties
Cross Arms	Bridge Timbers	Switch Ties

Creo-pine
TRADE MARK REG U S PAT OFF

SOUTHERN WOOD PRESERVING COMPANY, ATLANTA, GA.

Representatives in New York, Philadelphia, Toledo, Pittsburgh, Detroit, & Chattanooga



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Only "Custom Service" CAN GIVE *REAL* RESULTS

NO ONE herbicide can be a "cure-all" for the widely varying weed problems encountered by railroads from coast to coast.

That's why General Chemical has developed its *"Custom Service"* railroad weed control program... the *only* method for really effective results.

General Chemical tailors its program to meet the needs of the individual road. It uses only modern organic herbicides which research and experience have proved most suitable for specific vegetative and climatic conditions. Applications are made according to a carefully-planned spraying schedule, under the supervision of General's weed control specialists.

THE RESULT: You can get clean track immediately with high kill of weeds and grasses and continuous reduction in perennial root growth.

For full information, write today to—

Weed Killer Department

GENERAL CHEMICAL DIVISION
ALLIED CHEMICAL & DYE CORPORATION
40 Rector Street, New York 6, N. Y.

General Chemical Weed and Brush Killers

Proven by Experience

General Chemical Formula 7 (TCA, Acid in an Oil Base)
- For general purpose grass control.
- Used with one of the additives listed for over-all control of weeds.

General Chemical Formula 7 with 2, 4-D
- For use where grasses predominate, but includes sufficient 2, 4-D to control moderate infestations of broadleafed weeds.

General Chemical Formula 7 B-D
- For control of very resistant weeds and grasses. The amount of 2, 4-D has been increased and fortified by Pentachlorophenol.

General Chemical Sodium TCA (Liquid Concentrate)
- For soil treatment of noxious grasses.
- For all-purpose weed control when used with one of the ester additives listed.

General Chemical Emulsible PCP—Aromatic Oil
- Low cost contact type weed killer for use where weed and grass control problems are not severe... contains pentachlorophenol.

General Chemical 2, 4-D Amine Additive
- Used in conjunction with General Chemical Formula 7 for all-purpose weed and grass control.

General Chemical 2, 4-D Ester Additive
- For use with General Chemical Formula 7 or Sodium TCA where cotton or other plants susceptible to 2, 4-D are not present.

General Chemical 2, 4-D—2, 4, 5-T Ester Brush Killer (Water Soluble)

GENERAL CHEMICAL WEED CONTROL

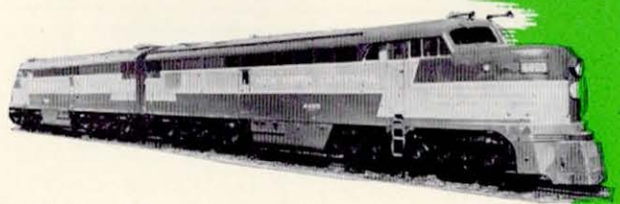
For Every Type of Diesel Locomotive

2250 HP Diesel Passenger Locomotive

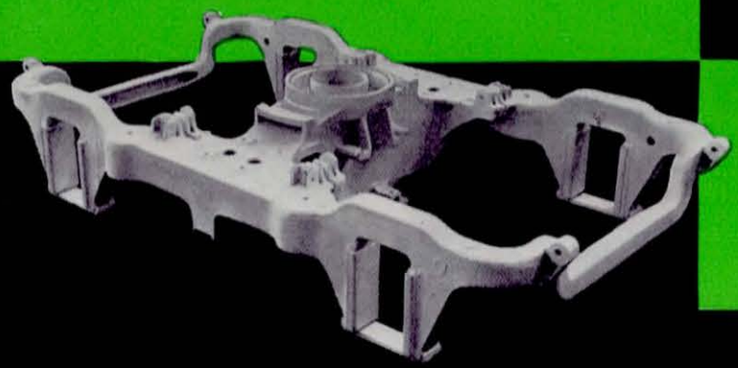
1600 HP Diesel Road Switcher

2250 HP Single Unit Diesel Passenger Locomotive

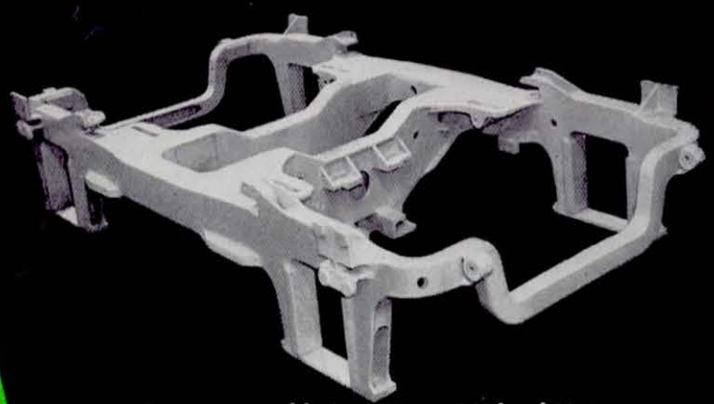
1600 HP Diesel Road Switcher



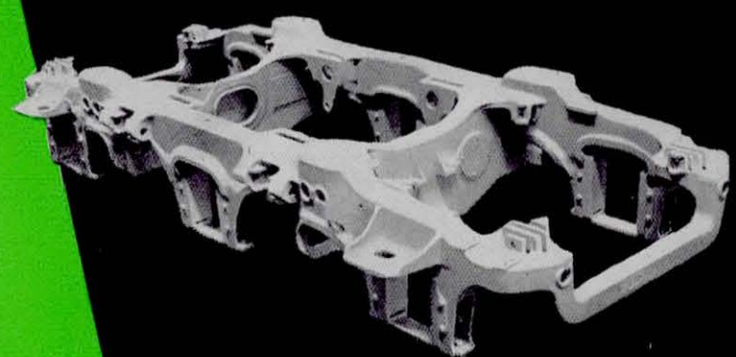
4000 HP Diesel Road Locomotive



Commonwealth One-Piece 4-Wheel Motor Truck Frame for Yard Switchers



Commonwealth One-Piece 4-Wheel Motor Truck Frame for Road Switchers



Commonwealth One-Piece 6-Wheel Motor Truck Frame for Road Locomotives

The Mark of Quality and Dependability

GENERAL

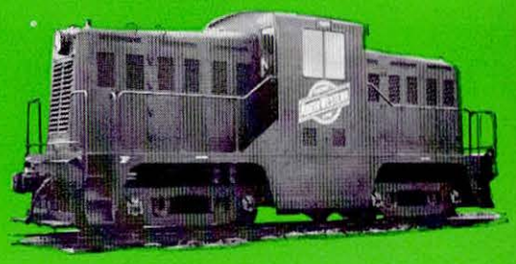
It Pays to Standardize on

COMMONWEALTH One-Piece Truck Frames and Bolsters

COMMONWEALTH One-Piece Cast Steel 4- and 6-Wheel Motor Truck Frames and Bolsters are used by America's leading builders of Diesel road locomotives, road switchers and yard switchers.

COMMONWEALTH One-Piece truck frames have demonstrated over a period of more than 25 years of service their exceptional dependability and low cost of maintenance. Proven designs with uniform properties throughout provide minimum weight with exceptional strength for this rugged service. The strong frame construction with integral pedestals assures permanent true alignment of wheels and axles.

Throughout America and many foreign countries performance has proven the outstanding dependability and economy of **COMMONWEALTH** Motor Trucks in every type of Diesel locomotive operation.



44-Ton Diesel Yard Switcher

3200 HP Diesel Road Freight Locomotive

800 HP Diesel Yard Switcher

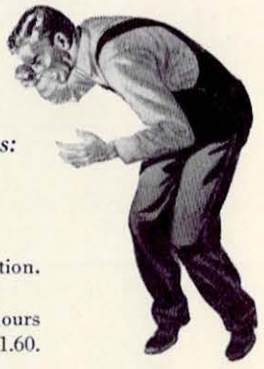
1200 HP Diesel Yard Switcher

1600 HP Diesel All Service Locomotive

STEEL CASTINGS

GRANITE CITY, ILL.
EDDYSTONE, PA.

Short or Long Term CAPITAL LOSS?



No matter how they are figured—
eye accidents are costly to industry.
Here are some of the estimated charges:

1 They cost nearly $400 in average compensation.

2 They cost $176,000,000 in lost man hours annually at an average per hour rate of $1.60.

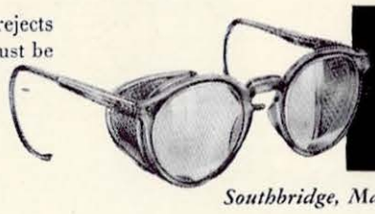
3 They cost an unknown but sizeable sum in idle machine time. (Remember, industry invests $6,000 or more in tools to provide each job.)

4 They cost another appreciable sum in impaired worker morale.

5 They cost additional money in increased rejects and lowered output when green workers must be substituted for skilled.

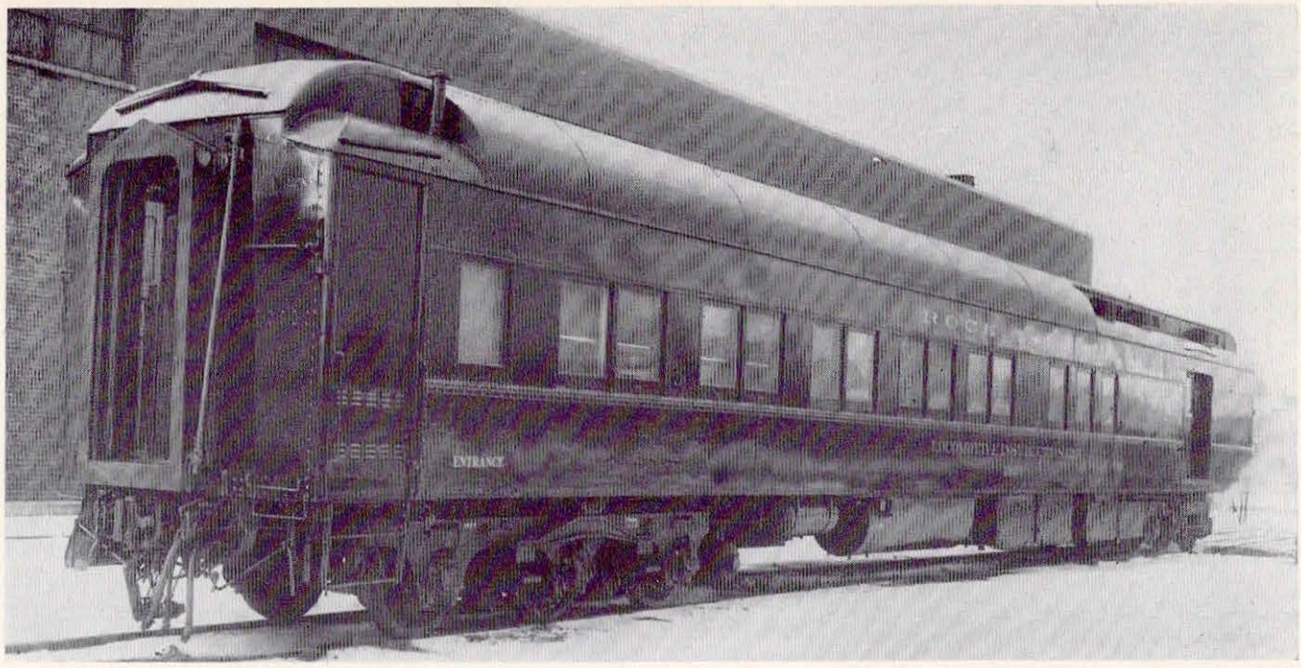
6 They cost money in first aid and medical attention whether the eye injury is major or minor.

Any industrial eye accident is a capital loss. If you lose the skill of a valued worker through the loss of an eye, you have a long-term capital loss in a very real sense—with no gain, long or short, to compensate. Contact your nearest AO Branch Office and learn how an AO Eye Protection Program can practically eliminate these costs and pay for itself in less than six months. Or write American Optical Company, 453 Vision Park, for free booklet "Improved Industrial Vision" which tells how AO's Industrial Vision Program cuts costs, increases production, decreases accidents.



American Optical COMPANY
SAFETY PRODUCTS DIVISION

Southbridge, Massachusetts • Branches in Principal Cities



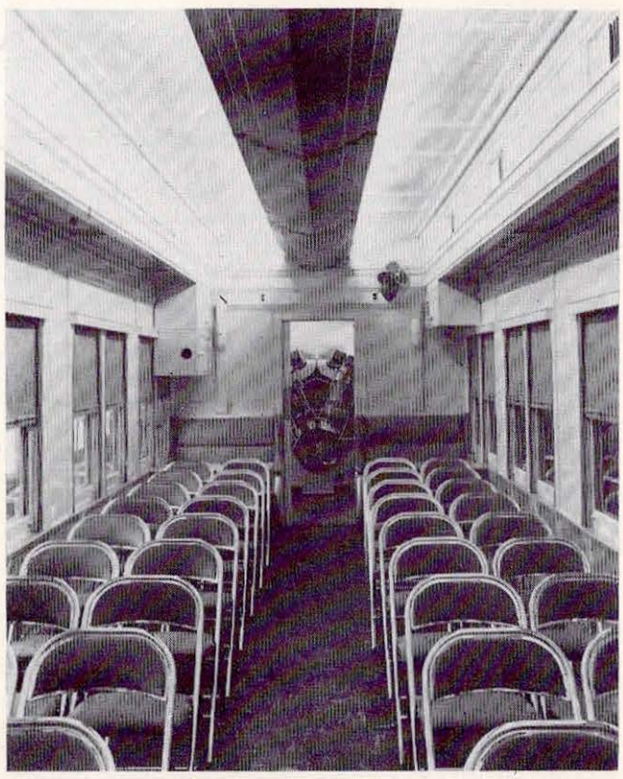
Diesel Instruction Car . . .

A Modern "School" for Rock Island Personnel

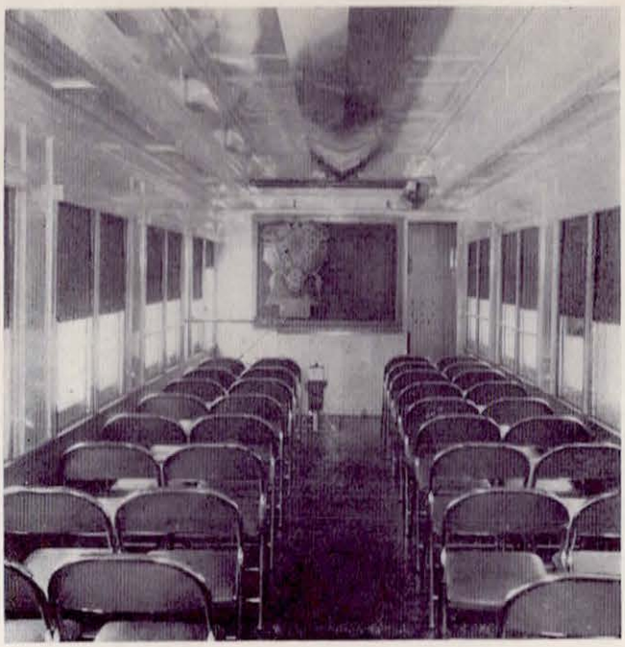
For the primary purpose of eliminating diesel-electric locomotive failures—especially those on the road from minor causes which comprise the majority of such delays—the Chicago, Rock Island & Pacific has purchased a completely equipped diesel instruction car and instituted a comprehensive training program for both operating and maintenance personnel. The car was bought from the Electro-Motive Division of General Motors Corporation after some modification and had, prior to its sale to the railroad, traveled some 9,500 miles on 17 roads giving instruction to 5,685 men. It was the first school car designed to teach both the theory and practice of diesel locomotive maintenance and operation.

While the initial use which the Rock Island will make of the car is the instruction of operating crews, it is completely equipped for giving a thorough course in all phases of maintenance and operation. To make such instruction readily understandable, working models of basic locomotive parts, as well as the tools with which to overhaul these parts, are incorporated to the extent that space permits.

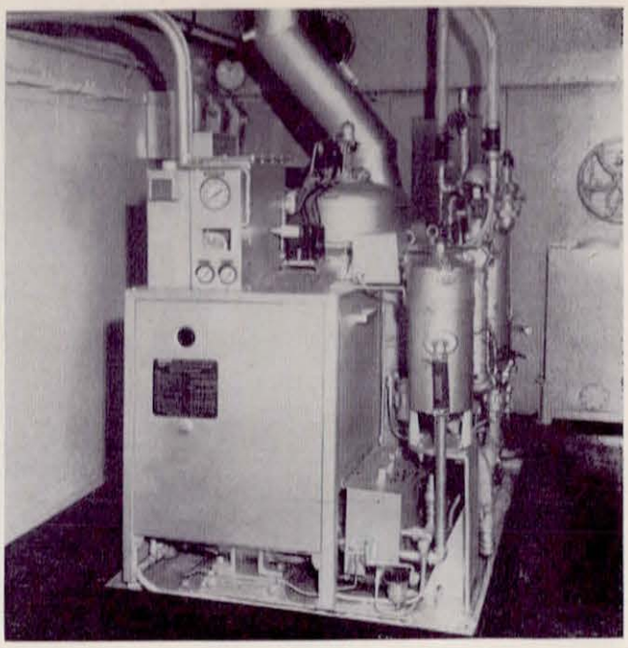
The car has a number of features which make it an exceptionally well-equipped diesel instruction car. It is, with but one exception so far as is known, the only railroad-owned instruction car which has a live steam generator. This is a Vapor model with a capacity of 1,600 lb. per hour. Contingent equipment to go with the generator includes a motor-generator set which furnishes 74-volt d.c. power to the steam generator. By including this



The projector, mounted on a base near the sliding door in the background, swings out of the way when not in use.



Interior of the car from the movie projector position. The car's "library" includes a dozen films and 200 slides.



The car has a live steam generator and remote controls identical to those at the fireman's station on a locomotive.

electrical converter set, the remote controls for the steam generator at the fireman's station could be made identical to those on a locomotive in service.

A four-cylinder cutaway model of a diesel engine serves a dual purpose. It permits visual inspection of the construction of engine components and how they function. It further permits the class to perform the actual physical labor of building up the assemblies on two opposing cylinders. Heads, liners, piston rods, bearings, etc., as well as auxiliaries light enough to be handled by hand, can be removed and reapplied. The cutaway engine model is housed in a separate space 17 ft. 4¼ in. long by 9 ft. 1½ in. wide, the latter being the inside width of the car throughout.

Cutaway models of individual parts are also part of the car's regular equipment. Examples are cross-sectional injectors, heads, hydraulic lash adjusters and valve bridges. This car is also one of the few diesel instruction cars, if not the only one, equipped with a slate blackboard.

The car carries a complete set of maintenance tools—more complete, in fact, than many repair shops. There is also a maple-top work bench to demonstrate to the class the proper methods of inspecting and of disassembling and assembling individual parts of the engine. The work bench has the additional function of permitting individual members of the class to do the actual inspection and assembly work themselves, thus helping to impress on their minds the procedure for doing the work and building up their skill in doing it.

Further opportunity for instruction and participation in using the right tools and doing the actual work involved in overhauling an engine is provided by another feature of the car. There is a cutaway section of a portion of a crankcase with heavy-repair tools mounted in operating positions. Among them are lower and upper deck boring bars and an air-operated wire brush machine to clean the cylinder-liner lower seal seats.

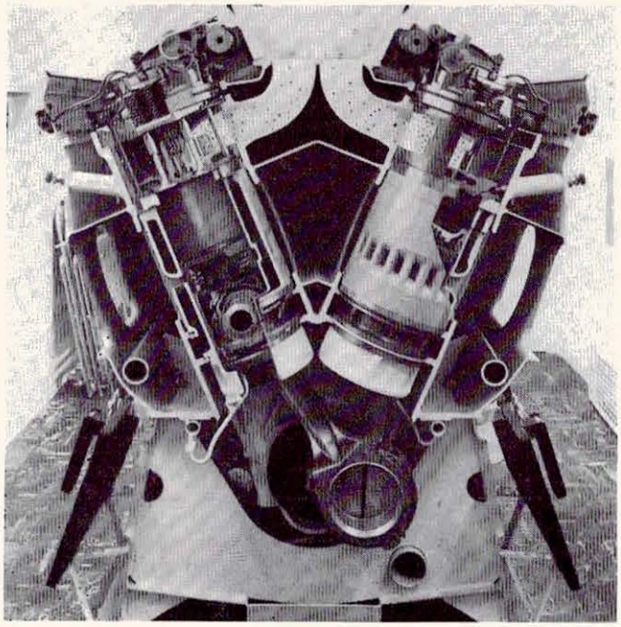
This exhibit is designed particularly for participating instruction. The boring bars and the cleaning machine can be removed, put in place, lined up, and actually operated. The lower liner seats can be fouled with dirt or shellac and then cleaned with the machine by members of the class to learn the proper method of operating this tool.

Educational Aids Used

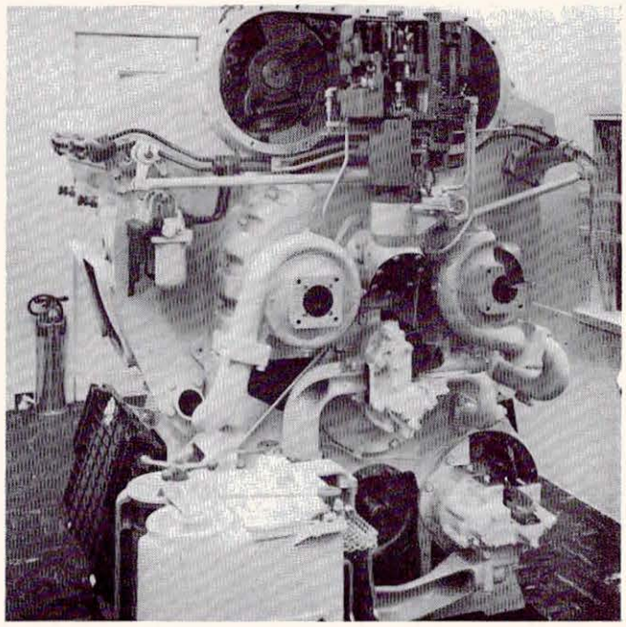
The value of slides and movies in education was not overlooked. The car carries a 3¼-in. by 4-in. slide projector and a 16-mm. sound motion picture projector. Some 200 glass slides and a dozen motion picture films are stored aboard the car for use as required. The glass slides cover a wide variety of subjects on overall diesel locomotive maintenance while the movies are concentrated principally on engine maintenance and electrical circuits.

The stand on which the projectors set during operation is mounted on a pivot on one of the partitions which separate the class room from the engine room. Such mounting permits the stand to be swung out of the way when not in use; it also positions the projector in the center of the car for showing the movies or the slides. In this way straight, distortionless projection is achieved and interference resulting from the audience being in the line of projection is avoided. A high quality beaded screen is used to further improve the value of the pictures to the audience by providing maximum clarity of the projection.

Comfort has been emphasized, on the theory that if a man is overly warm or cold or seated in an uncomfortable chair, too much of his attention is devoted to the source of his discomfort and too little to the subject-matter being presented. Two things in particular were done to insure comfort for the class. First, the car is completely air conditioned with a Frigidaire mechanical system capable of keeping the interior temperature and humidity at comfortable levels with a full class



One end of the four-cylinder cutaway engine shows cylinder assembly details for visual instruction.



Auxiliary end of the cutaway engine. The car also has a model of a portion of a crankcase with mounted heavy repair tools.

under any conditions normally encountered. Second, spring chrome chairs are installed with padded plastic seats.

Additional factors in creating an all-around pleasant atmosphere include the use of soft light colors, cream and blue, throughout the interior. Illumination is by 110-volt indirect fluorescent lighting.

The car is wired to utilize 110-volt a.c. for all interior purposes. It can be supplied by either 220-volt or 440-volt three-phase current from the power source. A transformer converts either of these outside voltages to the 110 volts used inside. Direct current within the car is supplied where needed by batteries. The batteries furnish an alternate supply of direct current for the steam generator in addition to that available from the motor-generator set.

Minor Troubles First

Although the car is completely equipped to give detailed instruction to maintenance personnel on all phases of servicing and heavy repairs, the Rock Island will employ the car first to teach operating crews some of the fundamentals of the equipment and its operation. The railroad reasons that the majority of diesel road failures are from minor causes which could be corrected on the spot by engine crews if they had a better understanding of the basic functions of the various component parts of the locomotive.

On passenger locomotives, for example, there are many little delays from steam-generator troubles which are minor in nature. Initial courses will therefore stress trouble-shooting rather than major servicing and repairs.

Emphasis throughout the courses will be placed on what each part does and why it does it. The emphasis on the "why" is based on the theory that if a man knows each step that a component goes through and why it performs these steps in the established order and manner-he is better able to remember what he has been taught and is better able to trace down the causes of trouble in the component.

Two classes per day on the same subject will be taught in the car, one beginning about 8 a.m. and the second about 1 p.m. This will enable most engine crews to make one or the other of the two classes each day. Each class will have about 2 ½ hours of formal instruction followed by a question period. For the first two or three months the classes will be primarily for operating men, although shop forces will sit in with the operating men in some cases. Later classes will be principally for maintenance men and will include explanations of improvements added to the locomotives by both the manufacturer and the railroad as well as the instruction on the basic design.

For the first year or so of operation the car will be used for formal instruction on Electro-Motive power only. Eventually it will be utilized for instruction on all makes of locomotives as the necessary training equipment is added by the Rock Island. Even during this first year of formal instruction on E.M.D. power only, the question period following the classes will be open to questions and discussions of troubles and remedies for all locomotive makes.

The only restriction on questions will be those pertaining to air brakes. These will not be admitted because the railroad has a separate air-brake car for instruction on this equipment. It is planned later to put the two cars together for maintenance classes at major repair points.

The car will be manned by a full-time instructor, a Rock Island electrician who has completed the two-month extensive training course at the Electro-Motive plant in LaGrange, Ill. The first session of the car will be at Des Moines, Iowa, where it will remain ten days. Next in order are stops at Cedar Rapids, Minneapolis, Minn., and Manly, Iowa, the latter an engine terminal. Eventually the car will cover all divisions of the 8,000-mile Rock Island system.

ORGANIZATIONS

The **Kansas City Traffic Club** has elected James F. McKemie, commercial agent, Central of Georgia, as president; Harry L. Ryan, traffic manager, Ash Grove Lime & Portland Cement Co., as first vice-president; and D. A. Everett, assistant general freight agent, Santa Fe, as second vice-president. Mr. McKemie succeeds Harold E. Bingham, director of traffic of the Spencer Chemical Company.

The **Western Association of Railroad Tax Commissioners** reelected W. K. Bush, general tax agent of the Chicago, Burlington & Quincy, as president during the group's recent annual meeting in Chicago. Three new vice-presidents were elected: C. W. Graham, tax agent, Pennsylvania, Chicago; W. E. Kline, real estate and tax comsioner, Missouri Pacific, St. Louis, and J. C. Kennedy, assistant tax commissioner, Great Northern, St. Paul. M. L. Boydston, tax commissioner, Chicago, Milwaukee, St. Paul & Pacific, Chicago, was elected secretary-treasurer.

The seventh annual exposition of the **Society of Industrial Packaging and Materials Handling Engineers** will be held at the Chicago Coliseum, October 14, 15 and 16. Concurrently, a "short course" educational program dealing with materials handling and packaging will be conducted by the mechanical engineering department of the University of Illinois. A regular feature of these expositions, the National Protective Packaging and Materials Handling Competition, will be held as usual.

The **Niagara Frontier Industrial Traffic League** has elected the following officers: President, Edward F. Lannon, Columbus McKinnon Chain Corporation, Tonawanda, N. Y.; first vice-president, Bernard A. Bondanza, J. W. Clement Company; second vice-president, Elmer W. Honecker, Trico Products Corporation; treasurer, Thomas J. Peffer, Buffalo Weaving & Belting Co.; general secretary, Urban C. Fischer, Dunlop Tire & Rubber Corp.; and secretary, reappointed, George P. Zier, Buffalo Chamber of Commerce.

The **Philadelphia Passenger Association** has elected the following officers: President, R. L. Roberts, Missouri Pacific; first vice-president, J. A. Barrett, Wabash; second vice-president, C. W. Meinsen, Chicago, Burlington & Quincy; secretary, T. F. Stefanski, Pennsylvania; treasurer, T. J. Manning, Baltimore & Ohio; and historian, J. C. Dolan, Northern Pacific.

Instead of meeting on September 3, 4 and 5 in the Roosevelt Hotel, New Orleans, as originally planned, the **Railway Tie Association** will hold its annual convention on October 22, 23 and 24 in the Jung Hotel in the same city.

Raymond L. O'Brien, traffic manager of Allied Mills, Peoria, Ill., has been elected president of the **Transportation Club of Peoria.** He succeeds Harry F. Willis, general agent of the Chicago, Burlington & Quincy. Other officers elected were: First vice-president, F. O. Goetz, Caterpillar Tractor Company and second vice-president, Erwin Solomon, Kroger & Co. L. R. Barnewolt, Peoria Joint Agency, was reelected secretary-treasurer.

The **Connecticut Valley Chapter of the National Railway Historical Society, Inc.,** will sponsor three rail-fan excursions over lines of the New York, New Haven & Hartford, on May 18, September 17 and October 19. Officers elected to serve the Valley chapter and its affiliated Connecticut Valley division of **Electric Railroaders Association, Inc.,** are: President, H. Gordon Pilkington, Danbury; vice-president, Eugene W. Hermann, Bridgeport; secretary, Robert E. Pratt, Clintonville; treasurer, Henry R. Stieg, Hartford; historian, Arthur Mitchell, Hartford.

The **Ohio Valley Transportation Advisory Board** will hold its 101st regular meeting in the Deshler-Wallick Hotel, Columbus, Ohio, on March 11 and 12. A joint luncheon session will be held on March 12 after the general session. Sponsoring the luncheon jointly are the **Columbus Transportation Club** and the **Columbus Chamber of Commerce.** The guest speaker had not been announced at press time for this issue.

The **Rail Traffic Association of Cincinnati** has elected the following new officers: Fred F. Foery (general agent, Santa Fe), president; Harold W. Gray (assistant general freight agent, Erie), vice-president; O. D. Dreyer (general agent, Western Maryland), secretary-treasurer. They will be installed at a luncheon meeting in the Cincinnati Club on March 24.

The next meeting of the **Eastern Car Foreman's Association** will be held in room 502, Engineering Societies building, 29 West 39th street, New York, on March 14, 7:45 p.m. James G. Dick, chief chemist and metallurgist, Canadian Bronze Company, Montreal, will speak on "Improving Railway Journal Bearing Performance." A buffet supper will be held in the Old Timers Grill, 7 E. 40th street, New York, at 6 p.m.

The March 11 dinner meeting of the **Transportation Club of Louisville** (Ky.) will be "Railroad Night." Robert M. Drysdale, Jr., executive vice-president, Federation of Railway Progress, Washington, D. C., will be the principal speaker. C. R. Sargent, general agent, Chesapeake & Ohio, will act as toastmaster. The meeting will be held in the Terrace room of the Kentucky Hotel starting at 6:30 p.m.

The **Women's Traffic Club of New York** will hold its next meeting on March 11, in the Park Sheraton Hotel, 55th street and 7th avenue, at 7 p.m. Dempster McIntosh, president of the Philco International Corporation, will be guest speaker.

OVERSEAS

Great Britain.—British Railways plan to add 573 diesel switching engines to their locomotive roster during the five years 1953-57. The new engines, including 432 350-hp. diesel-electric engines and 141 150/200-hp. diesel-mechanical engines, will be in addition to 130 diesel switchers already owned and 84 previously authorized. The decision to increase the amount of diesel switching power is the result of a special investigation showing that "economies could be obtained and efficiency increased" by changing from steam to diesel power in larger freight yards.

Iran.—The Iranian State Railways have invited bids until March 31 for supply of 180,000 steel railroad ties and accessories, according to a recent issue of Foreign Commerce Weekly. Quotations should be airmailed direct to the railways, Tehran, Iran.

Ireland.—Subject to approval of their respective Parliaments, the governments of the Republic of Ireland and of Northern Ireland have agreed to buy the Great Northern Railway of Ireland for a reported figure of £4,500,000. Operation of the line, after purchase, is expected to be carried on by a joint board with equal representation from both north and south Ireland. The Great Northern, the last privately owned railway in Ireland, operates 543 miles of 5 ft. 3 in. gage line, of which 319 miles are in Northern Ireland and 224 miles in the Irish Republic. It connects Dublin with Belfast and Londonderry, and has a number of secondary and branch lines serving other points. According to the latest available information, it owns 200 steam locomotives, 501 passenger-train cars, 15 diesel rail cars or rail buses, and 5,682 freight-train cars.

Southern Rhodesia.—Bids soon will be requested for construction of a new rail link between this country and Lourenco Marques, Mozambique, according to a recent issue of Foreign Commerce Weekly.

Spain. — The Westinghouse Electric International Company will supply this country's National Railways with 20 electric road locomotives, seven Ignitron rectifier substations and

related electrical equipment, all to be used in electrifying the Manzanares-Baeza-Cordoba line. Westinghouse also will supply technical assistance to a Spanish manufacturer who will build mechanical parts for the locomotives and assemble them at the firm's Bilbao plant. The Westinghouse equipment will be built in plants at East Pittsburgh, Pa., Sharon and Newark, N. J. Delivery of the locomotives is scheduled to be completed early in 1954.

SUPPLY TRADE

W. A. Rentschler Will Head Baldwin Eddystone Division

Walter A. Rentschler has been appointed vice-president in charge of the Eddystone Division of the Baldwin-Lima-Hamilton Corporation. Mr. Rentschler, who has previously been vice-president in charge of the Lima-Hamilton Division, will continue in charge of the Hamilton plant, which will come under the immediate supervision of J. F. Connaughton, who has been appointed general manager of the plant. The Lima Division will continue under the direction of H. F. Barnhart, who will report to M. W. Smith, president of the corporation.

Also announced was the appointment of Alex Smith as manager of a newly created export sales department, which is being established on a company-wide basis to serve and coordinate foreign sales activities of all divisions. C. A. Campbell, formerly head of export sales for the Eddystone Division, will become assistant manager of the new department, headquarters of which will be in New York City.

National Malleable 1951 Sales Set Company Record

The National Malleable & Steel Castings Co. in 1951 did the largest volume of business in its history and earned the second highest net profit, Cleve H. Pomeroy, president, has announced. Net sales were $63,921,463 last year, compared with $44,813,702 in 1950. Net income was $4,131,204, equal to $8.70 a common share, compared with $4,020,599, or $8.47 a share. At the end of the year, Mr. Pomeroy said, unfilled orders totaled nearly $21,000,000.

Fairbanks, Morse Net Income Was $4,905,556

Net sales of Fairbanks, Morse & Co. and subsidiaries in 1951 amounted to $116,087,596, an increase of nearly 36 per cent over the $85,423,868 reported for 1950. Net profit was $4,905,556, equal to $8.18 a common share, compared with $3,840,247, equal to $6.40 a share. On December 31, 1951, the backlog totaled $55,805,498, compared with $45,546,305 at the end of the preceding year.

Lee P. Thomas, who has joined the Peerless Equipment Company as sales representative at the company's general office at Chicago. He was formerly with the Baldwin-Lima-Hamilton Corporation's transportation division.

Safety Car Sales Were $6,371,780

Sales, including service revenue, of the Safety Car Heating & Lighting Co. and subsidiaries totaled $6,371,780 in 1951, compared with $5,681,784 in the preceding year. Net income was $794,078, equal to $2.11 a common share, compared with $727,945, equal to $1.93½ a share. At the year end, the annual report said, the company had a sufficient backlog of business to keep its facilities fully engaged for a considerable period.

Stockholders of the **Westinghouse Air Brake Company** will be asked to vote at the annual meeting in Wilmerding, Pa., on April 15 upon a proposal to increase the firm's authorized capital stock. The proposal would increase the issue from 4,200,000 common shares of $10 par each to 7,500,000 common shares of the same par value.

A. F. Becker, executive vice-president of the **Brandon Equipment Company,** Chicago, has been loaned to the Office of Price Stabilization in Washington, D. C., to act as business consultant on refractory industry matters.

C. M. Hursh has been appointed sales engineer of the **Union Switch & Signal—Division of Westinghouse Air Brake Company,** with headquarters at Chicago.

Arthur Templeton, formerly sales engineer in the Chicago area for **Templeton, Kenly & Co.,** has been appointed southwestern divisional sales engineer, with headquarters at 6505 Aberdeen avenue, Dallas, Tex., to cover Texas, Oklahoma and Louisiana.

Carl W. Tuohey, who joined the **Frank G. Hough Co.,** Libertyville, Ill. in June 1950, has been appointed representative for the company's sales district two, comprising New York, New Jersey, Pennsylvania, Virginia, Delaware, West Virginia and New England. He succeeds **William Cornell,** who has been recalled to active service with the United States Marines.

S. Wyman Rolph, president of the **Electric Storage Battery Company,** was elected president of the **Franklin Institute** at the recent annual meeting of the board of managers. Mr. Rolph succeeds **Richard T. Nalle,** president of the **Midvale Company.**

D. R. Myers has been appointed Chicago railway representative of the **Grandy Railway Equipment Company,** Cleveland, to succeed **F. W. Evinger,** who has resigned. Mr. Myers formerly was with the company's industrial and railroad department at Cleveland.

OBITUARY

Joseph C. Snyder, retired vice-president of Pullman-Standard Car Manufacturing Company, notice of whose death appeared in *Railway Age* February 25, began his business career in the New York Central's purchasing department. He later joined the Richmond Car Works, where he was subsequently appointed a vice-president. The Richmond company was acquired by the Standard Steel Car Company, of Pittsburgh, Pa., and the latter, in turn, by the Pullman Company to form the Pullman-Standard Car Manufacturing Company. Mr. Snyder turned his attention to sales for the newly formed company and was appointed a vice-president. He had charge of Pullman-Standard's Cleveland, Ohio, office from 1931 until his retirement in 1949.

EQUIPMENT AND SUPPLIES

FREIGHT CARS

The **Transportation Corps** has cancelled, because of a major specification change, its invitation for bids on 135 40-ton refrigerator cars (*Railway Age*, December 3, 1951, page 100). The corps said it would readvertise for bids on the cars, intended for foreign service, at a later date.

Meanwhile, the T.C. has ordered 127 standard-gage railroad maintenance cars for domestic service from the Kalamazoo Manufacturing Company.

SIGNALING

The **Erie** has ordered from the Union Switch & Signal Division of the

Westinghouse Air Brake Company material to extend the existing Salamanca-Randolph (N. Y.) traffic control installation westward to include Waterboro, involving additional controls for the existing Style "C" code control machine at Salamanca, code equipment, Style H searchlight signals, M-3 electric switch machines, SL-21A electric switch locks, as well as relays, transformers, etc. Field installation will be by railroad construction forces.

The **Kansas City Southern** has ordered equipment from the General Railway Signal Company for installation of 55 miles of absolute permissive block signaling between McElhany, Okla., and Watts.

The **New York Central** has ordered equipment from the General Railway Signal Company for installation of remote control in an interlocking plant at Fonda, N. Y.

PASSENGER CARS

The **New York, New Haven & Hartford** is inquiring for 100 coaches, 100 baggage cars and 60 electric multiple-unit cars. Estimated total cost of the 260 cars is approximately $25,000,000.

ABANDONMENTS

Division 4 of the I.C.C. has **authorized:**

NACOGDOCHES & SOUTHEASTERN.—To abandon a portion of its line, extending from Hayward, Tex., to a point near Woden, approximately 12 miles.

PENNSYLVANIA.—To abandon a 1.4-mile segment of its so-called Hunker branch, from a point near Hunker, Pa., to the end of the line.

CONSTRUCTION

Missouri Pacific Lines.—U. S. District Judge George H. Moore of St. Louis has authorized 1952 property improvements costing $7,135,259. Breakdown of total cost for each unit of the system is: Missouri Pacific, $5,714,029; Gulf Coast Lines, $635,920; and International-Great Northern, $785,310. The 1952 program calls primarily for replacement of obsolete facilities and for normal maintenance. Principal improvements include modernization of switching yards, additions to block signal system, renewal of bridges and improvement to existing equipment, flashing light signals at highway crossings and extension of radio usage.

New York Central.—This road has announced plans for a new diesel fueling and servicing facility, as well as a new dormitory and restaurant for road freight crews, at Gardenville, N. Y. near Buffalo, at an approximate cost of $1,000,000. The new diesel facility will consist of an inspection building, a fueling station, a million-gallon fuel oil storage tank and a turning wye. Many track changes will be made incident to the new construction. The present steam engine house will not be affected by the changes and will continue in operation as long as steam power runs in Gardenville. The new dormitory will contain 60 single bedrooms, a restaurant, a locker room, modern toilet facilities and a crew caller's office. Crews from the Syracuse and Erie divisions will be housed there between runs. Construction is expected to begin within a few months, depending upon availability of materials.

FINANCIAL

Chicago & Western Indiana.—*First and Refunding Mortgage Bonds.*—All five owning roads of the C. & W. I. have filed applications for authority to assume joint liability for the proposed $52,500,000 issue of C. & W. I. first and refunding mortgage bonds. The proprietary roads are the Erie, the Chicago & Eastern Illinois, the Wabash, the Grand Trunk Western, and the Chicago, Indianapolis & Louisville. (*Railway Age*, February 4, page 98).

The I.C.C. has authorized the C. & W. I. to negotiate for sale of the new bond issue without compliance with competitive bidding requirements. The road's application for authority to issue the bonds is still pending. The item in *Railway Age* of February 18, page 57, was in error in stating the commission had already approved the bond issue.

Greyhound Lines.—*Acquisition of American Buslines.* — The Greyhound Corporation has asked the I.C.C. for authority to acquire control of American Buslines, a transcontinental bus line operating coast-to-coast. The acquisition would be carried out by an exchange of stock, and Greyhound has asked the commission for authority to issue the necessary common and preferred shares to complete the transaction.

American Buslines has outstanding 145,780 shares of common, 10,413 shares of preferred and $525,000 in subordinated convertible debentures, due July 1, 1955. Greyhound proposes to issue, for exchange purposes, 131,202 shares of $3 par common and 15,663 shares of $100 par preferred stock.

The operations of American have never been financially successful, Greyhound told the I.C.C. It said the lack of feeder lines and connections helped cause this, and went on to say that continuation of American's service is threatened, unless some step is taken to incorporate its operating authorities and properties with those of financially stable motor bus operations.

As a result of the proposed stock exchange, Greyhound would acquire indirect ownership of net tangible assets and investments valued at slightly less than $3,000,000. This is also the estimated current market value of the securities Greyhound proposes to issue for exchange.

Greyhound presently operates about 2,444 buses. American operates some 350. The application to acquire control of American included a similar request for authority to acquire control of four smaller bus lines. The latter operate, altogether, approximately 80 buses, mostly in the far West.

Meridian & Bigbee River.—*Reorganization.*—W. W. Sullivan, reorganization manager, will have $8,662.25 for payment of expenses incurred by him in carrying out and putting into effect the reorganization plan for this road. The I.C.C. fixed this "maximum allowance" in a recent order.

New York Connecting.—*Trackage Rights.*—This road has asked the I.C.C. for approval of a supplemental agreement, covering its use of Long Island trackage between Fremont street in the borough of Queens, New York, and Bay Ridge in Brooklyn. Connecting has used this L.I. trackage since 1939, and the agreement is being modified to provide for higher annual payments to the latter road.

New York, Ontario & Western.—*Action on Sale Deferred.*—Federal Judge Edward A. Conger, at New York, has deferred until March 26 action on the proposed sale of this company, (*Railway Age*, February 11, page 80).

Pennsylvania.—*Equipment Financing.*—This road is placing about $50,000,000 in 15-year conditional sales contracts with banks and insurance companies to pay for most of its recent $60,000,000 purchase of freight cars and diesel units (*Railway Age*, December 10, 1951, page 69). Conventional equipment trust certificates will account for the remainder of the purchase price. Negotiations for the conditional sales contracts brought the road an overall cost of 3.32 per cent. The sale of equipment trust certificates is expected to reach the market some time next year. The road sold its last group of such securities on September 12, 1950.

Wisconsin Central.—*Reorganization.*—Division 4 of the I.C.C. has approved payment of $18,000 to James E. Dorsey, counsel for the trustees, for the year 1951.

New Securities

Division 4 of the I.C.C. has **authorized:**

DELAWARE, LACKAWANNA & WESTERN.—To assume liability for $2,970,000 of series K equipment trust certificates, to finance in part 26 diesel-electric locomotive units costing an estimated

$3,728,380. (*Railway Age*, February 18, page 57). Division 4 approved sale of the certificates for 99.058 with interest at 3 per cent—the bid of Salomon Bros. & Hutzler and three associates—which will make the average annual cost of the proceeds to the road approximately 3.17 per cent. The certificates, dated March 1, will mature in 15 annual installments of $198,000 each, beginning March 1, 1953. They were reoffered to the public at prices yielding from 2.2 to 3.2 per cent, according to maturity.

Security Price Averages

	Mar. 4	Prev. Week	Last Year
Average price of 20 representative railway stocks	57.02	55.22	57.00
Average price of 20 representative railway bonds	92.68	92.38	98.96

Dividends Declared

BOSTON & ALBANY.—$2, payable March 31 to holders of record February 29.

DENVER & RIO GRANDE WESTERN.—common, $1; 5% preferred, $5, both payable March 15 to holders of record March 7.

PITTSBURGH, FORT WAYNE & CHICAGO.—common, $1.75, quarterly; 7% preferred, $1.75, quarterly, payable April 1 and April 8, respectively, to holders of record March 10.

READING.—2nd preferred, 50c, quarterly, payable April 10 to holders of record March 20.

UNION PACIFIC.—$1.25, quarterly; 4% preferred, $1, semiannual; both payable April 1 to holders of record March 10.

RAILWAY OFFICERS

EXECUTIVE

The appointment of **Harold E. Roll** as vice-president of the UNION TERMINAL RAILWAY COMPANY (St. Joseph, Mo.), reported in *Railway Age* January 21, follows a railroad career which began in 1909, as a call boy for the Missouri Pacific. He served successively as yard clerk, brakeman and conductor until 1923, when he was appointed yardmaster. After serving at

Harold E. Roll

several points as yardmaster and later trainmaster, he was appointed assistant superintendent in 1926, becoming superintendent in 1931. Mr. Roll was transferred to the general offices as director of terminals in 1936, and became chief personnel officer in 1941. He was named general superintendent of the Western district in 1947, which position he held until his recent appointment.

Lewis A. Newell has been appointed assistant to the vice-president in charge of traffic of the TOLEDO, PEORIA & WESTERN. Mr. Newell's experience in traffic covers a period of 44

Lewis A. Newell

years; for the last 15 of them he was traffic manager of Armour & Co. in charge of rates, operation and service. In his new position he will act as consultant on special assignments and rate meetings.

J. C. James, executive vice-president and general counsel of the CHICAGO, BURLINGTON & QUINCY and its subsidiaries, retired on March 1. Mr. James was admitted to the bar in 1905 and started with the Burlington as a local attorney in Aurora, Ill., in 1914.

J. C. James

He became trial attorney at Chicago in 1917, general attorney in 1919, general solicitor in 1924, and general counsel in 1938. He was appointed vice-president, general counsel and director in 1939, and executive vice-president and general counsel in 1949. He will continue to serve the road as a director.

Edward H. Bunnell, vice-president in charge of the finance, accounting, taxation and valuation department of the ASSOCIATION OF AMERICAN RAILROADS at Washington, D. C., has retired under the pension plan of the A.A.R., after nearly 52 years of railroad service.

FINANCIAL, LEGAL & ACCOUNTING

As reported in *Railway Age* January 14, **A. J. Winder** has been appointed general solicitor of the NORFOLK SOUTHERN at Norfolk, Va. Mr. Winder was born at Edenton, N.C., on January 28, 1903, and received his LL.B. degree

A. J. Winder

in 1928 from Harvard Law School. From 1929 to 1942 Mr. Winder practiced law at Norfolk and in the latter year became assistant general solicitor of the N.S., which position he held until his recent appointment.

W. M. Burn, whose appointment as assistant general auditor of the GREAT NORTHERN was announced in *Railway Age* January 21, joined the railway as assistant statistician in the comptroller's department in 1920. He was appointed statistician in 1925 and served in that capacity until becoming general statistician in 1948, which position he held until his recent appointment. Mr. Burn succeeds **Henry K. Dougan,** who has retired.

Mr. Dougan entered railroad service in 1899, surveying railroads and mining companies during summers until 1908, when he was graduated from the University of Minnesota as a civil engineer. His next five years were devoted to railroad construction engineering in Washington and Montana, at which time he joined the G. N. as draftsman and engineer. In 1925 he was appointed assistant statistician, and later assistant general auditor. He was appointed executive assistant in 1930 and in 1934 returned to his post as assistant general auditor. Mr. Dougan served in the U. S. Army Air Forces from 1942 to 1944.

R. H. Ely, auditor of disbursements of the DELAWARE & HUDSON, has been appointed general auditor, with headquarters, as before at Albany, N.Y.,

succeeding **J. H. Reddy,** who has retired after more than 37 years of service, **D. J. Buckley** has been appointed auditor of disbursements, succeeding Mr. Ely. Mr. Reddy was born at St. Marys, Kan., on February 3, 1883, and attended St. Marys College (1901). He entered railroad service in June 1903 as office boy in the office of the district storekeeper of the Chicago, Rock Island & Pacific at Horton, Kan., and subsequently served as clerk, division storekeeper, chief timekeeper and chief clerk to master mechanic. Mr. Reddy joined the D. & H. on November 1, 1914, as shops and stores accountant at Albany and later served successively as assistant to federal auditor, auditor of disbursements, assistant to general auditor, auditor capital accounts and auditor miscellaneous accounts. He was appointed general auditor on January 1, 1945.

As reported in *Railway Age* January 14 **W. R. Bixler** has been appointed treasurer of the BALTIMORE & OHIO at Baltimore. Mr. Bixler was born on January 7, 1886, at Mitchell, Ind., and began his railroad career with the Cincinnati, Hamilton & Dayton (now B.&O.) on February 11, 1907, as a

W. R. Bixler

clerk at Indianapolis. On December 1, 1915, he was named assistant treasurer of the Cincinnati, Indianapolis & Western, a successor to the C.H.&D., and five years later he was elected treasurer. After the B.&O took over the C.I.&W. properties in 1927, Mr. Bixler was appointed assistant treasurer at New York.

E. E. Boyner, assistant general solicitor of the MINNEAPOLIS, ST. PAUL & SAULT STE. MARIE, has been appointed general solicitor, succeeding **Harold B. Ramsey,** whose retirement was reported in *Railway Age* February 4, page 100. **F. W. Crouch,** general attorney, has been appointed assistant general counsel. **W. J. Quinn,** commerce counsel, has been named assistant general counsel, while **R. L. Thorfinnson,** attorney, was advanced to general attorney.

Mr. Boyner joined the Soo Line in 1940 as attorney in the law department. He was appointed assistant general solicitor in 1945. From 1930 to 1940 he was with the law firm of Oliver & Donnally at Washington, D. C., and New York. He received his law degree from National University Law School in 1928.

Mr. Crouch received his law degree from the University of Minnesota Law School in 1937. He joined the Soo Line in 1938 as attorney, becoming general attorney in 1945.

Mr. Quinn received his law degree from the University of Minnesota Law School in 1935 and after two years of private practice, served as assistant United States attorney, District of Minnesota. He joined the Soo Line in 1940, leaving in 1942 to serve as special agent for the F.B.I. He returned to the railroad in 1945 as assistant commerce counsel until 1946 when he was appointed commerce counsel.

Warren H. Ploeger, assistant western counsel for the NORTHERN PACIFIC at Seattle, has been appointed assistant commerce counsel at St. Paul.

As reported by *Railway Age* January 21, **W. E. Roberts** has been appointed secretary and treasurer of the COLUMBUS & GREENVILLE at Columbus, Miss. He succeeds **George S. Gaines,** who has retired.

Mr. Roberts started his railroad career with the Yazoo & Mississippi Valley (now Illinois Central), in 1913 as messenger, and in 1916 joined the Mobile & Ohio (now Gulf, Mobile & Ohio) as a law clerk. After serving in the Navy during World War I, he went to the C.&G. as cashier in 1922, and was appointed tax agent in 1923. He was subsequently appointed public relations officer, assistant secretary and treasurer, and director of personnel,

W. E. Roberts

before receiving his recent appointment. He served in World War II from 1940 to 1945.

Mr. Gaines began his railroad career with the Mobile & Ohio as clerk in the legal department in 1899. He then worked for various law firms in Mobile, Ala., until 1904, when he returned to the M.&O. as clerk and stenographer in the office of vice-president and general counsel. He served with the M.&O. in several clerical capacities until 1921, when he became chief clerk to receiver of the C.&G. He was appointed secretary and treasurer of that company after its reorganization.

As reported in *Railway Age* February 4, **H. V. Cooper,** freight claim agent of the MISSOURI PACIFIC, and a former chairman of the Freight Claim Division of the Association of American Railroads, has retired after 38 years of service. Mr. Cooper's railroad career started as a timekeeper for the Chicago, Burlington & Quincy in 1901; he later became telegraph operator. In 1907 he joined the Great Northern as revising clerk, but returned to the Burlington in the same year as telegraph operator and station agent. He became loss and damage investigator in 1909, and in 1913 was appointed chief of overcharge investigators. Mr. Cooper joined the M. P. in 1914 as assistant freight claim agent at St. Louis, and in 1928 went to Houston, Tex., as superintendent of freight loss and damage claims. Four years later he returned to St. Louis in his former capacity, being appointed freight claim agent in 1942.

M. F. McNamara, assistant general claim agent for SOUTHERN PACIFIC LINES IN TEXAS AND LOUISIANA, has been appointed general claim agent at Houston, Tex., succeeding **Chris Emmett,** retired (*Railway Age*, January 21). Mr. McNamara began service with the S.P. as mechanical department clerk in 1911, and served in the purchasing and claim departments before his military service in World War I. Subsequently, he became chief clerk to division superintendent at Victoria, Tex., and then returned to the claim department in 1920, working at several points in Texas until his appointment as assistant general claim agent at Houston in 1945.

Mr. Emmett started his railroad career in 1912 as claim agent at San Antonio, Tex. He also was in military service during World War I, returned to the S.P. as claim agent, and served at several points in Texas. He was appointed general claim agent at Houston in 1945.

Floyd J. Stuppi, attorney for the ATCHISON, TOPEKA & SANTA FE at Chicago, has been named general attorney there.

OPERATING

R. M. Stone has been named general superintendent of the SEABOARD AIR LINE at Savannah, Ga. Mr. Stone has been acting as general superintendent since **Joseph N. Broetzman** went to Norfolk, Va., in September 1951 as acting assistant vice-president for operations. **Lander C. Bates,** act-

Fairmont

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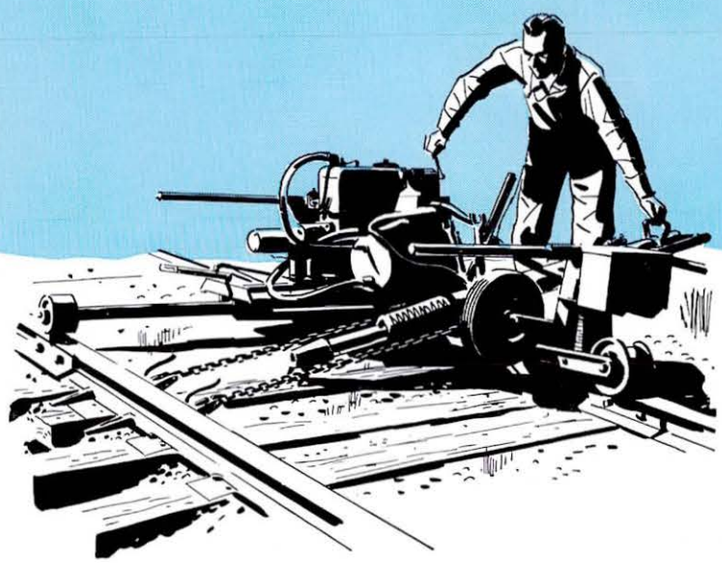

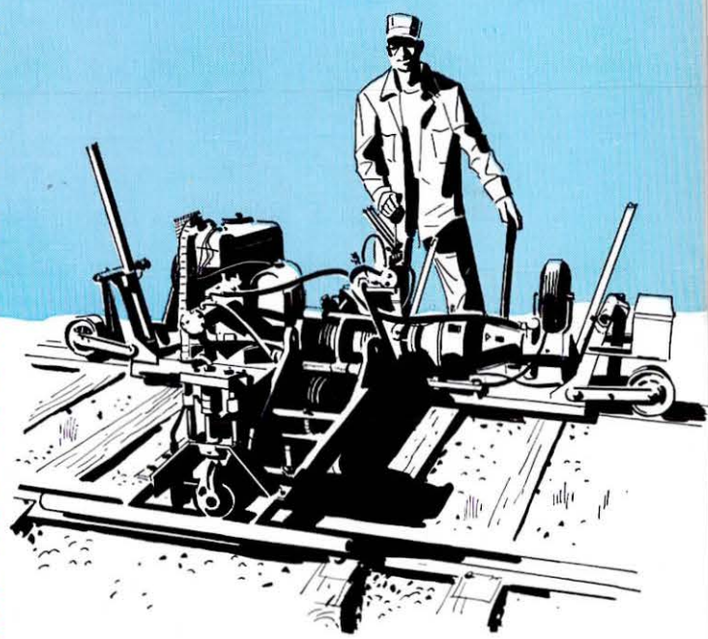

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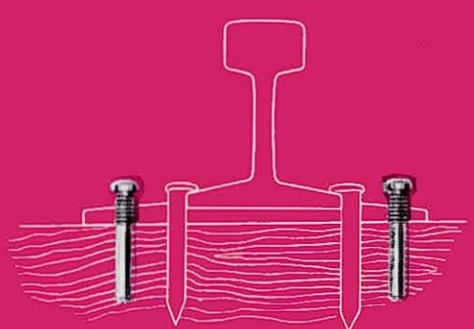

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ing superintendent of the North Florida division, has been appointed superintendent of that division at Jacksonville, and **John Henry Hester** has been named assistant superintendent of that division.

Mr. Stone was born at Poland, Me., on November 16, 1893, and became associated with the Seaboard in 1926, serving as a dispatcher at various points in Florida. He subsequently served as

R. M. Stone

assistant chief dispatcher, chief dispatcher, trainmaster, assistant superintendent and superintendent. Mr. Stone became superintendent of the North Florida division at Jacksonville in July 1948, which position he held until last year.

Lander C. Bates

Mr. Bates entered the service of the Seaboard in 1918 and for 12 years held various clerical positions at Hamlet, N. C., Tampa, Fla., and Abbeville, S. C. In 1930 he went to Jacksonville as secretary to the division superintendent, later becoming assistant superintendent of the North Florida division.

James J. Kinsella, superintendent of the CHICAGO JUNCTION and the CHICAGO RIVER & INDIANA (New York Central affiliates), has been appointed assistant to the general manager. He is succeeded by **Edward J. Crowley,** assistant superintendent. **W. J. Barry,** trainmaster for the INDIANA HARBOR BELT at Gibson, Ind., (another N.Y.C. affiliate) succeeds Mr. Crowley.

T. J. Prendergast has been appointed trainmaster, Toledo division, of the NEW YORK CENTRAL, at Toledo, Ohio.

Thomas A. Jerrow, general manager of Lines East of the GREAT NORTHERN, at Duluth, Minn., has been transferred as general manager of Lines West at Seattle, Wash. **C. O. Hooker,** superintendent of the Mesabi division at Superior, Wis., succeeds Mr. Jerrow at Duluth. **Walter R. Minton,** superintendent of the Kalispell division at Whitefish, Mont., succeeds Mr. Hooker at Superior. **Charles M. Rasmussen,** superintendent of the Klamath Falls division at Klamath Falls, Ore., has been appointed to succeed **Henry M. Shapleigh** as superintendent of the Butte division at Great Falls, Mont. Mr. Shapleigh succeeds Mr. Minton at Whitefish.

Eugene F. Oviatt, trainmaster in Willmar, Minn., has been named to succeed Mr. Rasmussen as superintendent at Klamath Falls, and **John H. Boyd,** trainmaster at St. Cloud, Minn., succeeds Mr. Oviatt at Willmar. **William T. Sloan,** assistant trainmaster at Grand Forks, N. D., succeeds Mr. Boyd at St. Cloud.

Lawrence Richardson, consultant in the operation and mechanical division of the RUTLAND, has been granted a two-months leave of absence to accept a United Nations assignment as railroad expert on a mission of technical assistance to the government of Yugoslavia.

J. H. Lawyer, assistant trainmaster of the MINNNEAPOLIS, ST. PAUL & SAULT STE. MARIE at Bismark, N. D., has been appointed trainmaster there. **Amos D. Henninger,** roadmaster at Hankinson, N. D., has been appointed supervisor of safety, succeeding **John B. Kelly,** retired.

Roy H. Weeks, car accountant for the ATCHISON, TOPEKA & SANTA FE, at Topeka, Kan., has been appointed superintendent of car service, succeeding **William P. Dolan,** retired.

Mr. Dolan entered Santa Fe service as a secretary at Albuquerque, N.M., in 1902. He held several clerical positions before being appointed car accountant at Los Angeles in 1927. He was transferred in this same capacity to Topeka in 1931 and was promoted to superintendent of car service there in 1935.

C. E. Lister, general superintendent of the CANADIAN PACIFIC at Moose Jaw, Sask., has been appointed acting general manager of the prairie region at Winnipeg, Man., while **E. S. McCracken,** general manager, is in Montreal, Que., assigned to special duties on labor negitiations. **J. W. Wilkes,** superintendent at Moose Jaw, has been named acting general superintendent of the Saskatchewan district. **A. M. Fraser,** assistant superintendent of the Regina division, has been appointed acting superintendent of the Moose Jaw division.

G. F. V. Middleton, assistant superintendent for the CANADIAN NATIONAL at Sioux Lookout, Ont., has been appointed superintendent of the Calgary division. **W. J. K. Armstrong,** rules instructor, has been appointed trainmaster at Kamloops, B. C.

T. J. Hale, who has been appointed superintendent of the Chattanooga and Huntsville division of the NASHVILLE, CHATTANOOGA & ST. LOUIS (*Railway Age*, January 14, page 254) started his career with the N.C.&St.L. in 1912 as extra agent-telegrapher. After holding various positions in the operating department, he was appointed trainmaster of the Atlanta division and Atlanta terminal in 1941. He was named assistant superintendent of the Chattanooga and Huntsville divisions in 1942, and served in that capacity until his recent appointment.

T. J. Hale

TRAFFIC

C. Warren Newland, traveling agent for the MINNEAPOLIS & ST. LOUIS at Detroit, has been promoted to assistant general agent at the same point.

L. J. Breedlove has been appointed general agent of the CHESAPEAKE & OHIO at San Francisco.

Frank M. White, Jr., general foreign freight agent of the BALTIMORE & OHIO, has been appointed foreign freight traffic manager, with headquarters as before at Baltimore, succeeding the late **F. J. Couse.**

Alvin L. Day, assistant freight traffic manager of the SOUTHERN at Atlanta, has retired at his own request, because of ill health, after more than 33 years of service with the system. **John C. Bland,** general passenger

(*Continued on page 88*)

One of the 160 Uses of CONCRETE on Railroads

NO. 6 OF A SERIES

The Nickel Plate Railroad chose concrete construction for its modern engine terminal in Bellevue, Ohio (below). The original engine house, part of which is shown above, was built in 1882. It was 65 feet deep and had 20 stalls. During its 65-year history it had to be remodeled four times. The new concrete terminal is 128 feet deep and contains 18 stalls, each with a concrete inspection pit 100 feet long, 3 feet 10 inches wide.

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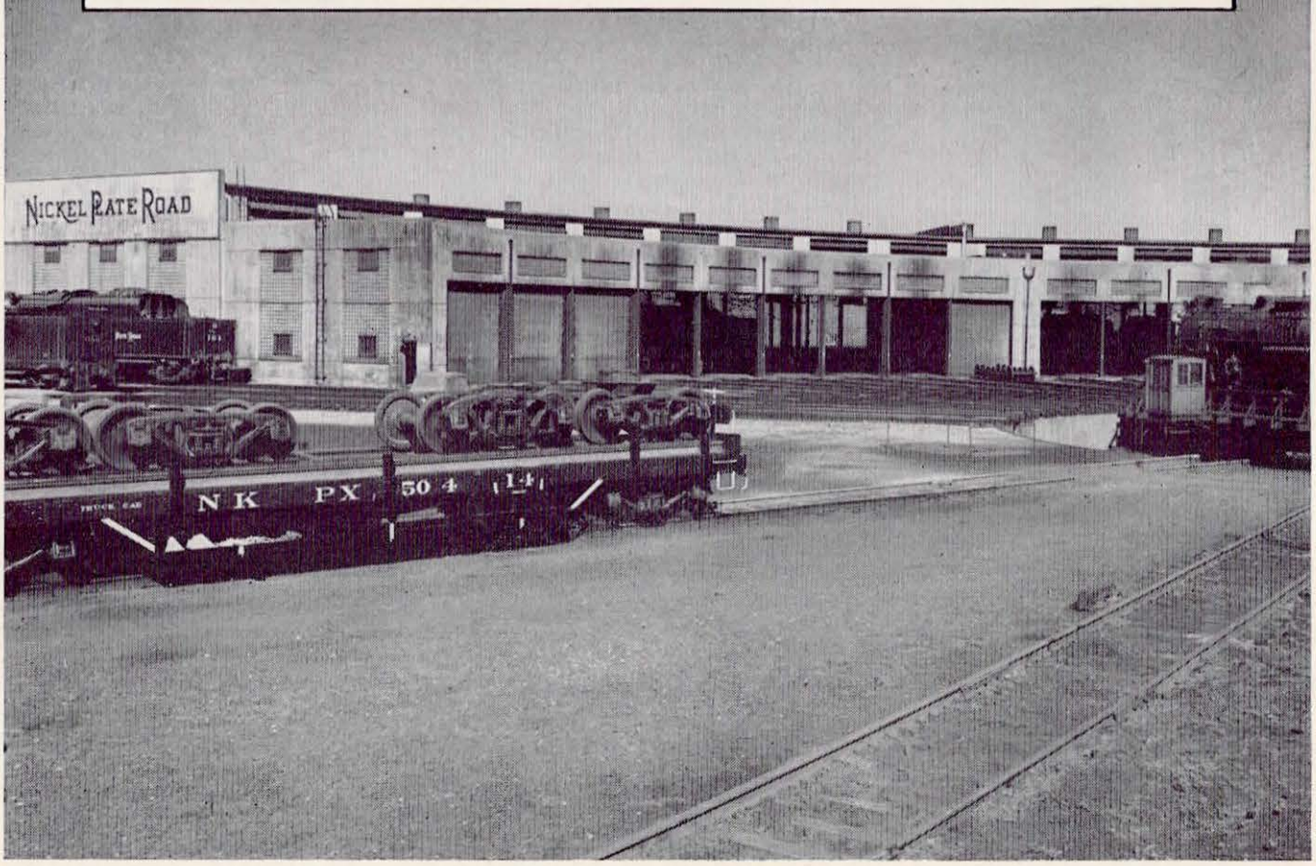

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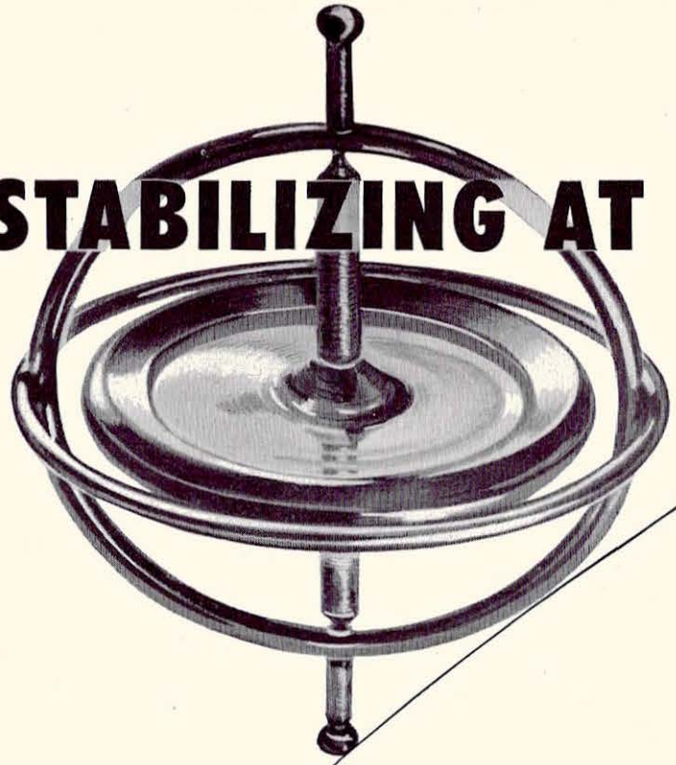

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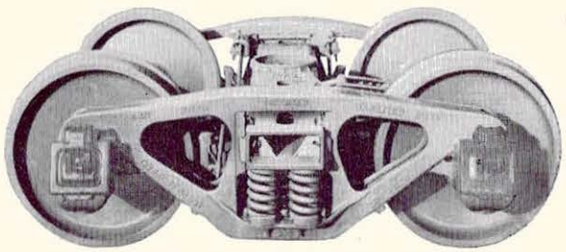


* STABILIZED TRUCKS

5833

STANDARD CAR TRUCK COMPANY

332 SOUTH MICHIGAN AVENUE, CHICAGO, ILLINOIS

(*Continued from page 85*)
agent has been promoted to assistant passenger traffic manager, with headquarters as before at Memphis, Tenn. **William Jardine,** who was appointed assistant general western freight agent, two months ago, has been promoted to general western freight agent, with headquarters remaining at Chicago. He succeeds **Walter H. Beard,** whose appointment as executive general agent at Jacksonville, Fla., was reported in *Railway Age* March 3, page 84. **J. Russell Price,** general agent at Kansas City, Mo., succeeds Mr. Jardine as assistant general western freight agent at Chicago. **W. Kenneth Bien,** commercial agent at Kansas City, succeeds Mr. Price as general agent there. **Reuben R. Holt,** commercial agent at Los Angeles, has been appointed general agent, freight and passenger departments, at San Francisco, succeeding **G. W. Edler, Jr.,** whose transfer to Pittsburgh was reported in *Railway Age* March 3, page 86.

Fred W. Holder, assistant city passenger and ticket agent of the LOUISVILLE & NASHVILLE at Mobile, Ala., has been appointed district passenger agent at the same point, succeeding **H. C. Geron,** retired.

W. G. Lacey, general agent of the CHICAGO, MILWAUKEE, ST. PAUL & PACIFIC at Indianapolis, Ind., has been appointed general agent at Detroit, Mich., succeeding **E. D. Schafer,** who has resigned. **S. P. Elmslie,** traveling freight at Minneapolis, Minn., succeeds Mr. Lacey.

K. F. Zimmerman has been appointed general agent, freight department of the CHICAGO & NORTH WESTERN, at Minneapolis, Minn., succeeding **F. J. Herhusky,** transferred.

Gene F. Cermak has been appointed coal freight agent for the CHICAGO & EASTERN ILLINOIS at Chicago.

Bruce A. Rogers, director of development of the KANSAS CITY SOUTHERN lines at Kansas City, Mo., has retired after 52 years of service.

Charles J. Fischer, general agent for the WESTERN PACIFIC at Seattle, has been transferred to Los Angeles, succeeding **D. C. Wilkens,** retired. **Stanley E. Dinkel,** general agent at Stockton, Cal., succeeds Mr. Fischer at Seattle.

G. G. Kottenstette, recently appointed general passenger agent of the WABASH (*Railway Age*, February 18), began his railway career in 1909 as office boy and ticket stock clerk for that road. He was in continuous service as reservation clerk, assistant depot passenger agent, assistant city ticket agent and city ticket agent up to 1918, when he took leave to serve in the U. S. Army. He returned to the Wabash in 1919 as assistant depot passenger agent. In 1920 he was appointed division passenger agent and served at several points before receiving his recent promotion.

MECHANICAL

H. H. Link, traveling engineer of the MINNEAPOLIS, ST. PAUL & SAULT STE. MARIE at Enderlin, N.D., has been appointed fuel supervisor at Minneapolis, succeeding **O. E. Wolden,** retired.

J. E. Potts, assistant to superintendent of motive power of the ST. LOUIS-SAN FRANCISCO, has been appointed assistant to chief mechanical officer, with headquarters as before at Springfield, Mo.

ENGINEERING AND SIGNALING

R. E. Caudle, assistant engineer of structures of the MISSOURI PACIFIC at Houston, Tex., has retired after 36 years of service.

John E. Hoving, special engineer of the NORTHERN PACIFIC, at St. Paul, has been appointed assistant to the chief engineer at Pasco, Wash. Mr. Hoving has been with the N.P. since 1917, starting in the engineering department, and has been special engineer for the past year.

J. H. Wallis, communications engineer of the BALTIMORE & OHIO, has been appointed superintendent of communications, with headquarters as before at Baltimore, filling the vacancy caused by the death of **Lincoln J. Prendergast** (*Railway Age*, January 14, page 267). **N. J. Morrisson, Jr.,** assistant communications engineer, has been promoted to communications engineer.

R. W. Middleton, division engineer of the Trans-Missouri division of the CHICAGO, ST. PAUL & PACIFIC, has been appointed division engineer of the Rocky Mountain division at Butte, Mont. He succeeds **W. E. Ring,** who has retired after 38 years of service. **H. E. Hurst,** assistant engineer-construction, succeeds Mr. Middleton at Miles City, Mont.

Lawrence T. Ferguson, general roadmaster of the Nebraska division of the UNION PACIFIC, has been appointed engineer of track, with system jurisdiction.

K. E. Dunn, division engineer, Ohio Central division of the NEW YORK CENTRAL, has been appointed special engineer, office of vice-presidents, at Chicago, succeeding **L. O. Lower,** retired. **J. D. Fraser** succeeds Mr. Dunn at Columbus, Ohio.

Harold L. Paxton, assistant engineer of the western region of the PENNSYLVANIA at Chicago, has retired after 47 years of service.

SPECIAL

Steve Canton has been named editor of publications and **Robert W. Bryan,** assistant editor, of the RAILWAY EXPRESS AGENCY. Mr. Canton, who has been in public relations for the R.E.A. for the past 10 years, and more recently was air express publicity representative, succeeds **William J. Cleary,** who has been placed in charge of all air express publicity. The post of assistant editor was newly created with the addition of "News of Progress," a bi-monthly employee newspaper. The company also issues the "Express Messenger."

Dr. A. C. Arnett has been appointed chief medical director of the CHICAGO, INDIANAPOLIS & LOUISVILLE, at Lafayette, Ind.

OBITUARY

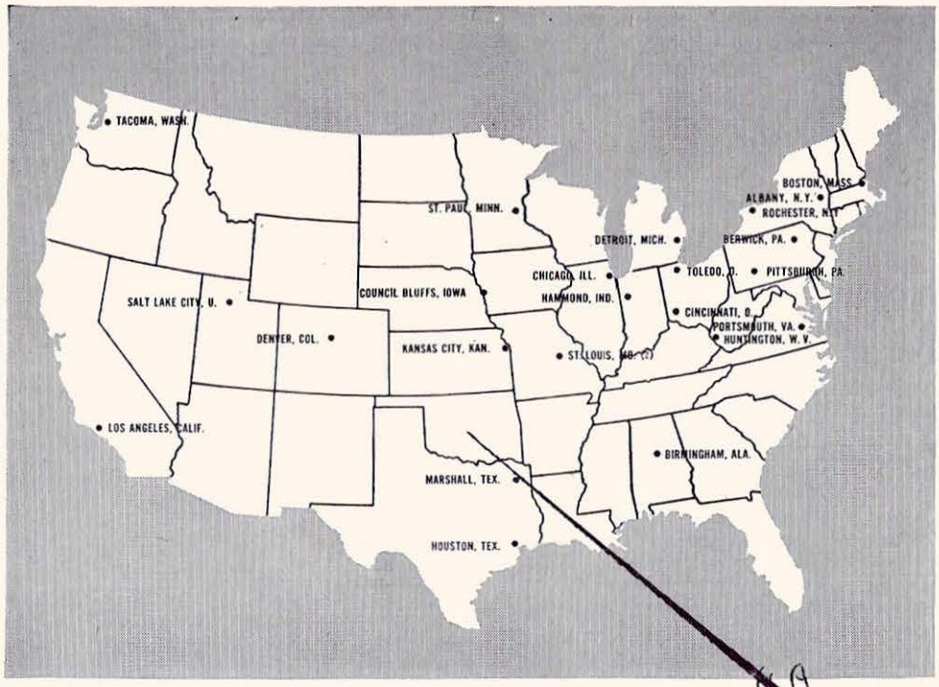
Edward A. Dougherty, 65, chief engineer of the NEW YORK CENTRAL lines west of Buffalo, at Chicago, died on February 27 at St. Joseph's hospital, Chicago, of a heart ailment.

W. D. Taylor, 49, electrical engineer of the Central region of the CANADIAN NATIONAL at Toronto, Ont., died on February 20. Mr. Taylor was a working member of the Electrical Section of the Association of American Railroads. He was born at Ottawa, Ont., on December 18, 1902, and attended McGill University (B.Sc. 1927). Entering railroad service in 1927 as electrical inspector on the C.N., he was appointed assistant electrical engineer in 1929. Mr. Taylor was engaged in sales engineering and general engineering, railway and industrial equipment, from 1931 to 1946 and in the latter year he became electrical engineer of the Central region of the C.N.

Frederick Jay Couse, 66, foreign traffic manager of the BALTIMORE & OHIO at Baltimore, Md., died on February 9, after an extended illness.

Harry C. Busk, auditor of freight accounts of the CHICAGO & NORTH WESTERN, died February 22 at Clearwater, Fla. He entered railroad service in 1907 as agent-telegrapher for the C.&N.W. Since 1913 he had been in continuous service with that road, becoming cashier-chief clerk at that time. In 1914 he was appointed traveling auditor, serving in that capacity until 1932 when he became assistant auditor, freight accounts. In 1936 he was appointed auditor freight accounts, the position he held at the time of his death.

Robert Rankin Commins, 67, vice-president and general manager of the CENTRAL OF GEORGIA at Savannah, died of a heart attack en route to Washington, D. C., on February 26.



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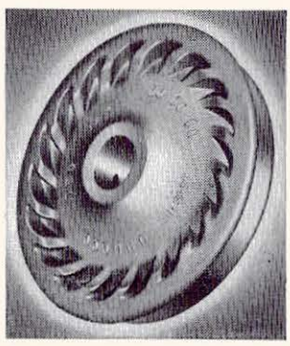
Added together, availability and accessibility help keep freight cars rolling . . . help railroads keep car wheel inventories down to a practical minimum.



Today's AMCCW wheels have more brackets—giving thicker, heavier, more continuous flange support. And they have a heavier tread on both rim and flange sides.

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Available locally
Short-haul delivery
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Rails' Diet Is "Bread And Water," Says R.B.A.

Describing the average railroad's return on net property investment as a "bread and water diet" compared with the return common in other industries, the Railway Business Association has asked, in a ten-page pamphlet just released, that national transportation policy be amended to "ensure economic justice for all commercial carriers."

In the pamphlet, Association President P. Harvey Middleton says that regardless of the angle at which one approaches the transportation problem, there is no remedial program that does not involve gradual elimination of subsidies. "Workable competition is just not possible when your competitor is able—through the largess of government—to charge lower rates than you do." The federal government he added, has spent over $64 billion on highway, inland waterway and air transport in the past 50 years.

"An equitable solution to the transportation problem is of greater national importance than the solution of any other economic problems with which we are now confronted," Mr. Middleton continued. "The preservation of private enterprise in all of our basic industries depends upon the solvency of the railways. . . . The pattern of socialism in other countries is well defined. . . . While public sentiment is now opposed to government ownership, it might be thrust upon us if privately financed transportation becomes insolvent in its unequal competitive struggle with government-aided transport."

The association's program for a "fair solution" of the transportation problem —as approved by its board of directors —concludes the pamphlet with seven basic points here summarized:

(1) Railways should be accorded an opportunity for earning a fair return on net invested capital.

(2) All "for hire" interstate carriers should have equal opportunities in the use of transport facilities provided by public funds.

(3) All "For Hire" interstate carriers should be permitted to operate other forms of transport within reasonable territorial limits.

(4) Adequate user charges should be imposed for construction, maintenance and improvement of facilities.

(5) An impartial investigation of proposals for public expenditures for additional projects should be made.

(6) The present policy of making consolidations voluntary and permissive —rather than mandatory—should be continued.

(7) All "for hire" interstate carriers should be placed under regulation by a single government agency reporting directly to Congress.

FIRST-DAY-OF-SALE CEREMONIES for B. & O. commemorative stamp—Senator Herbert R. O'Conor of Maryland speaking at the 125th anniversary luncheon of the B. & O. in Baltimore on February 28. Also in the photograph above are, left to right: Gov. Theodore R. McKeldin of Maryland; vice-president H. E. Simpson of the B. & O., who presided at the luncheon; and, partially obscured by the speaker's desk, Assistant Postmaster General O. A. Pearson, who made presentations of the first sheets of the stamps. The stamp was illustrated on page 20 of the February 25 issue of *Railway Age*.

Role of Weighing Bureau In Claim Prevention

At least 264 men on the payroll of the Western Weighing & Inspection Bureau are concerned largely with the prevention of freight loss and damage, according to F. A. Piehl, manager of the bureau, in an address to the Stock Yards District Traffic Club in Chicago February 21. Of this number, according to the speaker, 33 men devote their entire time to this task. Among them are a furniture loading and packing supervisor, newsprint inspectors at Chicago, Kansas City and Memphis, grain inspectors at western terminal markets, clay products inspectors, fruit and vegetable inspectors, and livestock experts.

On December 1, 1951, the bureau put to work in the Chicago area two roving consultants to call upon shippers in the area and "suggest, educate and help" them to load properly. This work at Chicago is paid for by eastern carriers, as well as western lines.

Court Rules on Harbor Allowances, State Taxes

The Central of New Jersey's long fight to obtain increased allowances from line-haul rates to cover car floatage and lighterage service at New York harbor came to an end last week. The Supreme Court upheld a 1949 order of the Interstate Commerce Commission dismissing the C.N.J. complaint.

In a brief order, the high court affirmed a district court's findings in favor of the I.C.C. The commission, joined by some 30 railroads, had asked the court to rule as it did.

This adverse decision for the C.N.J. was one of two which that road encountered at the Supreme Court on March 3. The other had to do with the assessment of a New Jersey franchise tax on net railway operating income. The court dismissed the latter case "for want of a substantial federal question," and thereby let stand a state court ruling against the railroad.

The harbor-allowance case dates from 1944, when the C.N.J. first asked the commission to prescribe larger allowances at New York. This allowance is deducted from the line-haul rate and paid to harbor roads before the line-haul rate is prorated.

When the C.N.J. asked for an increase in its allowance it asked also, because of competition, that other harbor roads receive a like increase.

An October 11, 1948, order of the commission approved an increase in the allowance. Protests from other

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SCRAPPY SAYS:

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MORE SCRAP TODAY... MORE STEEL TOMORROW

THE iron and steel industry faces a serious scrap shortage, growing more critical every day. . . . It will be impossible for producers to make the steel tonnages demanded for rearmament and essential civilian needs, unless consumers cooperate by furnishing *more scrap*. . . . Most desperately needed now is heavy industrial iron and steel scrap. . . . Keep the cobwebs from gathering at your own plant by turning in more of your own scrap today.

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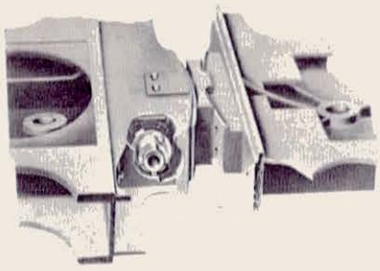
The steel industry is using all its resources to produce more steel, but it needs your help and needs it now. Turn in your scrap, through your regular sources, at the earliest possible moment.

CUT locomotive maintenance COSTS

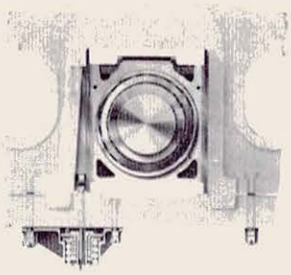
with these TWO SHOCK ABSORBERS

The Franklin E-2 Radial Buffer



The Franklin E-2 radial buffer reduces maintenance by dampening and absorbing horizontal shake and vertical vibration. This results in less wear on chafing plates, drawbars and pins; fewer pipe failures; less displaced brickwork; and fewer loose cabs. It requires minimum attention and will make any locomotive, at any speed, a better riding engine. Crews appreciate the greater comfort it brings.

The Franklin Compensator and Snubber—Equally important with roller-bearing or surface-bearing locomotives, the Franklin Compensator and Snubber keeps the driving box or housing snug in the pedestal jaw, regardless of expansion or wear. It will absorb unusual thrusts and shocks. Driving box pound is eliminated. Wear and the possibility of failure of crank pins and rod bearings are minimized. Tire mileage is extended by reduction of quarter slip.



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railroads led the commission to reconsider, and on December 29, 1949, it reversed the 1948 order and dismissed the C.N.J. complaint. The road appealed this 1949 order to the courts, but failed to obtain the relief sought when the courts upheld the order.

The New Jersey tax case, also decided last week, was a challenge to the manner in which state authorities construed a 1948 tax law. The law imposed a franchise tax of 10 per cent on net railway operating income of rail carriers operating in that state.

In assessing this tax on the C.N.J. the state took into account the profitable operations of C.N.J.'s subsidiary, Central of Pennsylvania. Meanwhile, the road charged that the state excluded from its computations operating deficits in cases where New Jersey roads had such deficits on lines outside the state. State authorities have construed the law "with no other purpose or guide than the maximization of revenue," the C.N.J. said in taking the matter to court. The state courts found against the carrier, and those findings were left intact by the Supreme Court's dismissal of the road's appeal.

Four other railroad cases were handled by the Supreme Court on March 3. One was a labor jurisdictional dispute, and the high court agreed to review a lower court's decision on this matter.

The case is *Brotherhood of Railroad Trainmen v. Howard.* In 1946, the St. Louis-San Francisco made an agreement with the B.R.T. providing, in part, that after April 1, 1946, "the practice of train porters performing work generally recognized as brakemen's duties will be discontinued."

Complainant Howard, a train porter on the Frisco, went to U. S. District Court, seeking to enjoin the B.R.T. agreement that would displace him. This court held the matter to be a jurisdictional one, and said administrative agencies operating under the Railway Labor Act have exclusive jurisdiction in such cases.

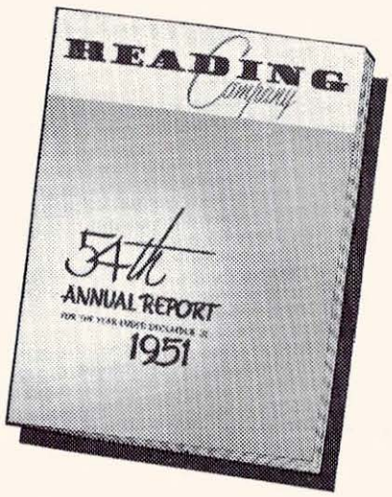
An appeal was carried to the Court

Car Surpluses and Shortages

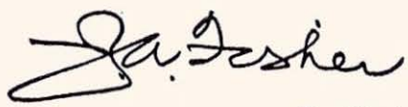
Average daily freight car surpluses and shortages for the week ended March 1 were announced by the Association of American Railroads on March 6 as follows:

	Surplus	Shortage
Plain Box	998	806
Auto Box	95	0
Total Box	1,093	806
Gondola	132	746
Hopper	1,477	443
Covered Hopper	312	0
Stock	2,523	0
Flat	222	568
Refrigerator	2,048	256
Other	565	25
	8,372	2,854

READING COMPANY
reports for 1951



- Revenues of $131,177,889 were highest in the Company's history.
- Dividends of $2.00 per share were paid on both the Preferred and Common Stocks, making the 46th consecutive year in which dividends have been paid on all classes of stock.
- A total of $23,922,394 was invested in capital improvements in 1951, of which $16,290,113 was for equipment and $7,632,281 was for improvements in road property. In the past six years, Reading has invested $67,940,000 in new equipment and $20,980,000 in road improvements.
- With the acquisition of fifty new 1,600-hp. general purpose diesel-electric units in 1951, Reading became predominantly a diesel-powered road.
- Work was completed on the new Morrisville Branch, built to serve U. S. Steel's Fairless Works at Morrisville, Pa. From this new plant, scheduled to open in the spring of 1952, Reading will receive substantial traffic.



President.

REVENUES, EXPENSES and EARNINGS for 1951	December 31 1951	December 31 1950	Increase or Decrease
Revenues from Operation—Transportation of freight, passengers, mail, express, and all other	$131,177,889	$118,952,178	$12,225,711–I
Expenses of Operation—Cost of transportation service, maintenance and depreciation of road facilities and equipment, and solicitation of traffic	104,062,934	93,530,278	10,532,656–I
Leaving as Net Revenue from Operations	$ 27,114,955	$ 25,421,900	$ 1,693,055–I
Tax Accruals—Federal and state income, railroad retirement, unemployment insurance, and other taxes applicable to railway operations	$ 15,042,883	$ 12,229,871	$ 2,813,012–I
Net Receipts from Rent of Equipment and Jointly Used Railway Facilities	1,246,925	200,360*	1,447,285–I
Net Railway Operating Income	$ 13,318,997	$ 12,991,669	$ 327,328–I
Other Income—Dividends, interest and rentals, less miscellaneous deductions	$ 1,769,169	$ 1,852,263	$ 83,094–D
Gross Income Available for Fixed Charges	$ 15,088,166	$ 14,843,932	$ 244,234–I
Fixed Charges—Interest on funded and unfunded debt, rent for leased roads, and amortization of discount on funded debt	$ 5,555,958	$ 5,536,281	$ 19,677–I
Net Income Available for Dividends, Capital Expenditures and Other Corporate Purposes	$ 9,532,208	$ 9,307,651	$ 224,557–I

*Debit.

of Appeals, Eighth Circuit, where the court ruled that it was not a jurisdictional dispute between the porters and the B.R.T. It said the Frisco agreement effected a consolidation of the crafts of brakemen and train porters, and it enjoined the parties in the case from giving the agreement any other effect. The B.R.T. was ordered to act as statutory representative of the train porters, and the railroad was ordered to recognize seniority of individuals in the newly consolidated craft in accordance with each person's service status.

The B.R.T. brought the case to the Supreme Court, raising the question of whether separate crafts can, by judicial decree, be consolidated into a single craft. The high court will hear the case.

The other cases on which the Supreme Court acted last week included two Federal Employers' Liability Act proceedings, and one in which Peter Duryee, trustee of the New Jersey & New York, was seeking a more favorable financial settlement with the Erie. The court refused to review the latter case, which was decided against the N.J.&N.Y. in the lower courts.

Mr. Duryee contended that during the Erie reorganization, the N.J.&N.Y. was operated as a "mere adjunct" of the Erie and a "fraudulent conspiracy" was carried out "to despoil the assets and properties of the New Jersey." He asked payment of $10 million in claims.

The liability-act cases included one in which a carpenter, employed by a private contractor, was injured while at work on a bridge of the Spokane, Portland & Seattle. The resulting court case led to a finding that a railroad may delegate to an independent contractor the work of repairing or maintaining tracks and bridges without employees of the contractor coming under the liability act.

In the case of *Squire v. Wheeling & Lake Erie*, the Supreme Court reversed an Ohio court in a liability-act proceeding. An employee, injured while on duty, later signed a release, but then alleged in court that the railroad obtained the release by fraudulent means. The high court cited its recent decision in *Dice v. Akron, Canton & Youngstown* as the basis for its finding in the present case. (*Railway Age*, February 25, page 21).

U. S. Army Photos

THE "KOREA EXPRESS," a modernized 15-car troop train, has recently been put into service by the Army's 765th Transportation Railway Shop Battalion in an effort to provide United Nations forces in Korea with the best transportation facilities possible under the circumstances. The interior of one of the modernized 85-seat coaches, with up-to-date lighting and heating equipment, is shown above; the interior; of the same car, before conversion, below. Major Robert H. McCafferty, of Pueblo, Colo., of the Denver & Rio Grande Western, is commanding officer of the 765th; Major Melvin C. Shingler, of Altoona, Pa., a former supervisor for the Pennsylvania, is executive officer; and Lieut. William E. Martin of Tampa, Fla., is supervisor of the passenger car shop where the modernization and conversion job was carried out.

C. N. Revamp Plan Not Yet Ready

The Throne Speech which disclosed the Canadian government's legislative intentions for the present session of Parliament made no mention of a measure to provide for recasting the capital structure of the Canadian National. It is expected, however, that the government will complete its studies of the subject and draft the necessary legislation to permit submission of a measure before the end of the session, which will last at least four months.

One railroad matter was mentioned in the Throne Speech, which said: "As a measure designed to assist in the development of our natural resources Parliament will be asked to consider legislation to enable the Canadian National to build a branch line in British Columbia between Terrace and Kitimat (for the proposed big aluminum plant)."

Port Groups Ask Cost Study on Ex-Lake Grain

Civic and commercial groups of Baltimore and Philadelphia have asked the Interstate Commerce Commission to look into terminal costs involved in handling ex-lake grain for export at New York, Baltimore and Philadelphia.

The I.C.C. should enter into an investigation, on its own motion, as to the extent and cost of terminal services at these three ports, petitioners said. Such a study, limited to terminal services only, would show pronounced service differences and consequently the lower costs prevailing at Baltimore and Philadelphia, they said.

The latter two cities contend that services provided at New York are superior, and a differential rate in their favor is therefore warranted. Last year a federal court thought otherwise. It reversed an I.C.C. order approving such a differential.

The differential amounted to one-half cent per 100-lb., and had existed

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WAUKESHA Engine Driven RAILWAY EQUIPMENT

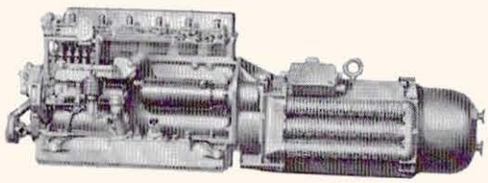
1935	★ Chicago & North Western (D) ★ Illinois Central ★ Missouri Pacific ★ Texas & Pacific
1936	Canadian Pacific Railroad ★ Chicago Milwaukee St. P. & Pacific ★ Chicago Rock Island & Pacific (D) ★ Mpls. St. Paul & Sault Ste. Marie ★ St. Louis-San Francisco ★ Southern Pacific (D) ★ Union Pacific (D)
1937	★ Chicago St. Paul Minneapolis & Omaha ★ Northern Pacific ★ Texas & New Orleans ★ Gulf Mobile & Ohio
1938	Southern Pacific of Mexico
1939	★ The Pullman-Company (D)
1940	★ Chicago Burlington & Quincy (D) ★ Denver & Rio Grande Western ★ Minneapolis & St. Louis
1941	★ Chesapeake & Ohio ★ Kansas City Southern ★ Seaboard Air Line
1942-4	WAR PERIOD
1945	★ Nat'l Railways of Mexico ★ Great Northern (D) ★ St. Louis & Southwestern ★ Western Pacific
1946	★ Atchison Topeka & Santa Fe
1947	Chicago Indianapolis & Louisville Missouri-Kansas-Texas ★ Chicago South Shore & So. Bend
1948	★ Chicago & Eastern Illinois (D) ★ Spokane Portland & Seattle
1949	Pullman-Standard Car Mfg. Co. (D) Bessemer & Lake Erie Duluth Missabe & Iron Range
1950	Fort Worth & Denver City
1951	Chicago Great Western Nashville Chattanooga & St. Louis Toledo Peoria & Western

★ Have placed repeat orders—there is no better endorsement.
(D) Diesel Enginators*.

‡ *Operating from 1 to over 500 units. Of these, more than 120 are Diesels*

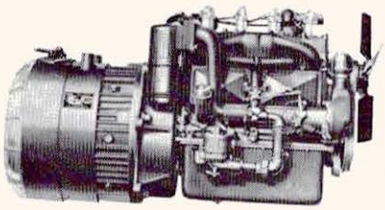
DIESEL ENGINATORS*

Waukesha 25 KW—Enginator*—32-V., 64-V., or 110-V., DC; 31.25 KVA, 220-V., 60-cycle 3-phase AC.

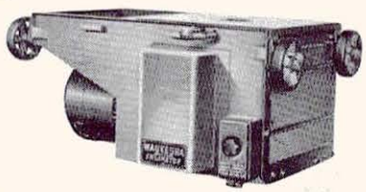


Waukesha 25 KW Diesel Enginator*—fuel injection side.

PROPANE ENGINATORS*

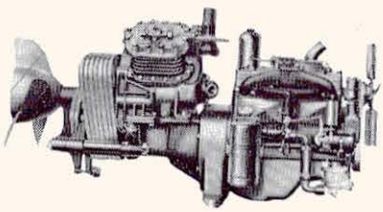


7½ KW Waukesha DC Enginator*—compact, lightweight, dependable, automatic, entirely independent—supplies full voltage at all times.

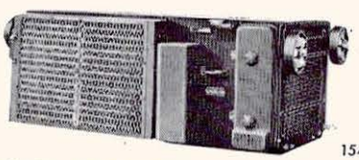


7½ KW Waukesha DC Enginator* Unit, 32-V. or 64-V. DC; Propane Engine; in cushion wheel-mounted cabinet.

PROPANE AIR CONDITIONING UNITS



Waukesha Ice Engine, 7-8 tons—delivers full car-cooling capacity under thermostatic control, regardless of car location or movement.



Ice Engine Unit, with propane engine. Sound absorbing material lines engine compartment and unit has cushion wheel mounting.

*Reg. U.S. Pat. Off.

154R

WRITE FOR LITERATURE

RAILWAY DIVISION WAUKESHA MOTOR COMPANY WAUKESHA, WIS.

Largest Builders of mobile engine-driven Refrigeration and Generator Equipment

since 1905. When the court established equality for all the ports, there was a flurry of rate cutting between roads serving Baltimore and Philadelphia, and those serving New York and northern ports. The I.C.C. suspended these rate-cutting tariffs and now has the matter under investigation. (*Railway Age*, February 11, page 15.)

In their present petition, the Philadelphia-Baltimore interests charged the court with having "dealt lightly" with differences in terminal services. The court seized upon an absence of precise cost data as a ground for refusing to agree that a rate differential was justified, they said. This proposed investigation would provide such cost data.

7% Freight Traffic Drop Seen for 1952

The shift toward military production will cause 1952 railroad freight traffic volume in the United States to drop about seven per cent below 1951, the Econometric Institute, consultants on business activity, has estimated. Charles F. Roos, president of the institute, said that while national industrial production as measured in dollars will not be significantly different than last year, freight traffic will decline "principally because war goods contain less material, in relation to total dollar value, than do civilian goods."

"This high dollar value for war goods," he added, "means that these goods have a high man-hour content. Consequently, production of war goods affects industrial production more than it does railroad revenue ton-miles." Dr. Roos' estimate is based on components of a commodity production index which weighs the volume of industrial, agricultural and construction activity.

"WE HAVE CAUSE TO BE OPTIMISTIC," President D. J. Russell (standing) told more than 200 Southern Pacific freight and passenger traffic men when he opened a three-day traffic "family meeting" in San Francisco on February 14. Citing the population growth of the S.P.'s territory, Mr. Russell said the road had recorded a net average gain of one new carload-producing industry on its lines for each calendar day in the past 25 years. The meeting—largest of its kind in S.P. history—wound up with separate tours of the city for the groups.

News Briefs . . .

. . . The fifth of the Lehigh Valley's five new 1,600-hp. diesel-powered tugboats, for use in New York harbor, has been named the "Capmore," in honor of the company's marine department superintendent, Charles M. Moore. Capt. Moore joined the L. V. in 1907; served for some years as a tugboat captain; was appointed assistant superintendent in 1917, and became superintendent of floating equipment in 1920. Between 1933 and 1937, when railroads serving New York pooled their harbor operations, he was chief operating officer of railroad marine services, and for four years during World War II was deputy associate director of the Division of Railway Transport of the Office of Defense Transportation at New York. Mrs. Moore christened the new tug named for her husband when it was launched at Oyster Bay, N. Y.

. . . Joint hotel ticket offices in Chicago have discontinued sale of the traditional folding "strip" ticket in favor of the new book-type ticket (*Railway Age*, July 30, 1951, page 26), which utilizes special carbon-backed coupons to cut sales transaction time. Besides reducing the number of forms needed to "stock" the offices, "streamlined" tickets obviate the need for rubber stamps, pasters, and punches normally required for interline ticket sales.

Federal Barge Line Resumes "Express" Service

With departure of a tow from New Orleans on February 19, the Federal Barge Lines resumed the "express" service to St. Louis and Chicago started on the Mississippi river last year.

Southward service began February 23 from St. Louis and three days later from Chicago. Subsequent departures are on a weekly basis from both cities. The company's new schedule indicates additional express service may be added later. Shippers are advised that all carload and l.c.l. package freight on hand 48 hours before a scheduled departure will be handled on the express tows.

Brilliant Electric Markers On Long Island Coaches

Electric marker lights with high visibility are now being installed on Long Island Rail Road passenger cars as a step toward further improving the visibility of rear ends of trains at night. These lights are being built into the ends of the cars in the positions formerly occupied by the removable oil lamps.

The first light of this type tried on the Long Island had a 1½-in. lens. This provided reasonable visibility, but in an effort to increase visibility still further, the lights now being installed were developed experimentally. They consist of 5⅜-in. ruby step lenses which permit visibility at a considerable lateral angle as well as to the rear of the train, and are lighted with 30-watt, 32-volt concentrated-filament lamps.

The road is temporarily using a movable red plastic spectacle behind the powerful single headlight lens at the rear of each train of electric cars as a supplement to rear marker oil lamps. The headlight, however, cannot be seen from a lateral angle and uses a far greater amount of electric current than two of the new lamps. Tests made on the railroad have shown that the new lights are clearly visible for a mile and, in daylight, stand out much more prominently than the headlights because of the special lenses.

At present 109 cars are in service with the 5⅜-in. marker lights. With completion of the program now authorized, 355 cars will be equipped.

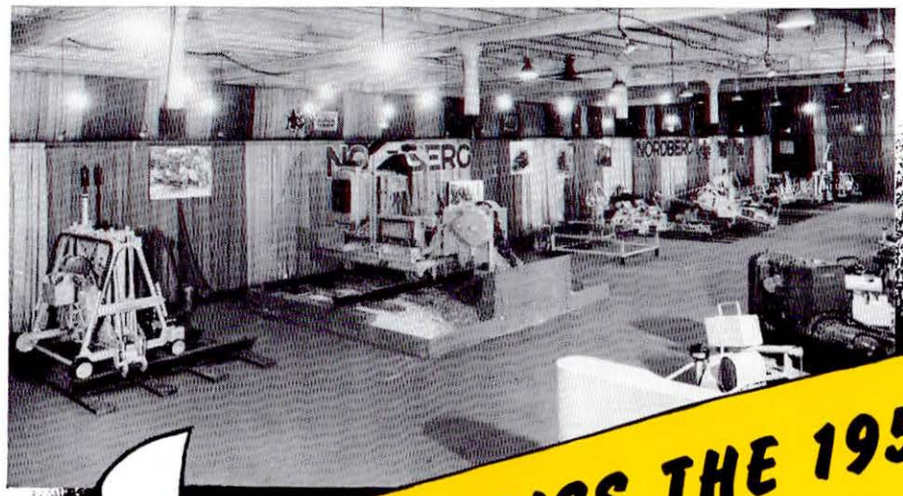
Montana Intrastate Rates

The Interstate Commerce Commission has found that undue discrimination against interstate commerce results from failure of railroads in Montana to receive intrastate rate increases which are in line with interstate rates generally.

Montana's Board of Railroad Commissioners has authorized the rail carriers in that state only a portion of the Ex Parte 162 and 166 increases. No increase has been authorized in Ex Parte 168.

The roads came to the I.C.C. for relief. They claimed the low level of intrastate rates in Montana was depriving

(*Continued on page 101*)



DON'T MISS THE 1952 NORDBERG EXHIBIT at the CHICAGO COLISEUM ...We have something NEW to show you!

80% of our exhibit space devoted to machines developed in the last four years

NEW FOR '52

"GANDY" . . . for pulling and inserting ties and for handling material

"DUNRITE" TRAKGAGER . . . gauges the tie plates (Seeing is believing). See them in BOOTHS 7-S to 20-S

It will pay you to inspect the full line of modern, money-saving Nordberg track maintenance machinery that will be on display at the 1952 N.R.A.A. exhibit in the Chicago Coliseum, March 10-13, inclusive. This will be the most complete, operating exhibit that Nordberg has ever shown, with new and improved machines for meeting today's maintenance needs.

Why not make the Nordberg exhibit *your* headquarters at the show? *We'll be looking for you in BOOTHS 7-S to 20-S, in the south end of the Coliseum.*

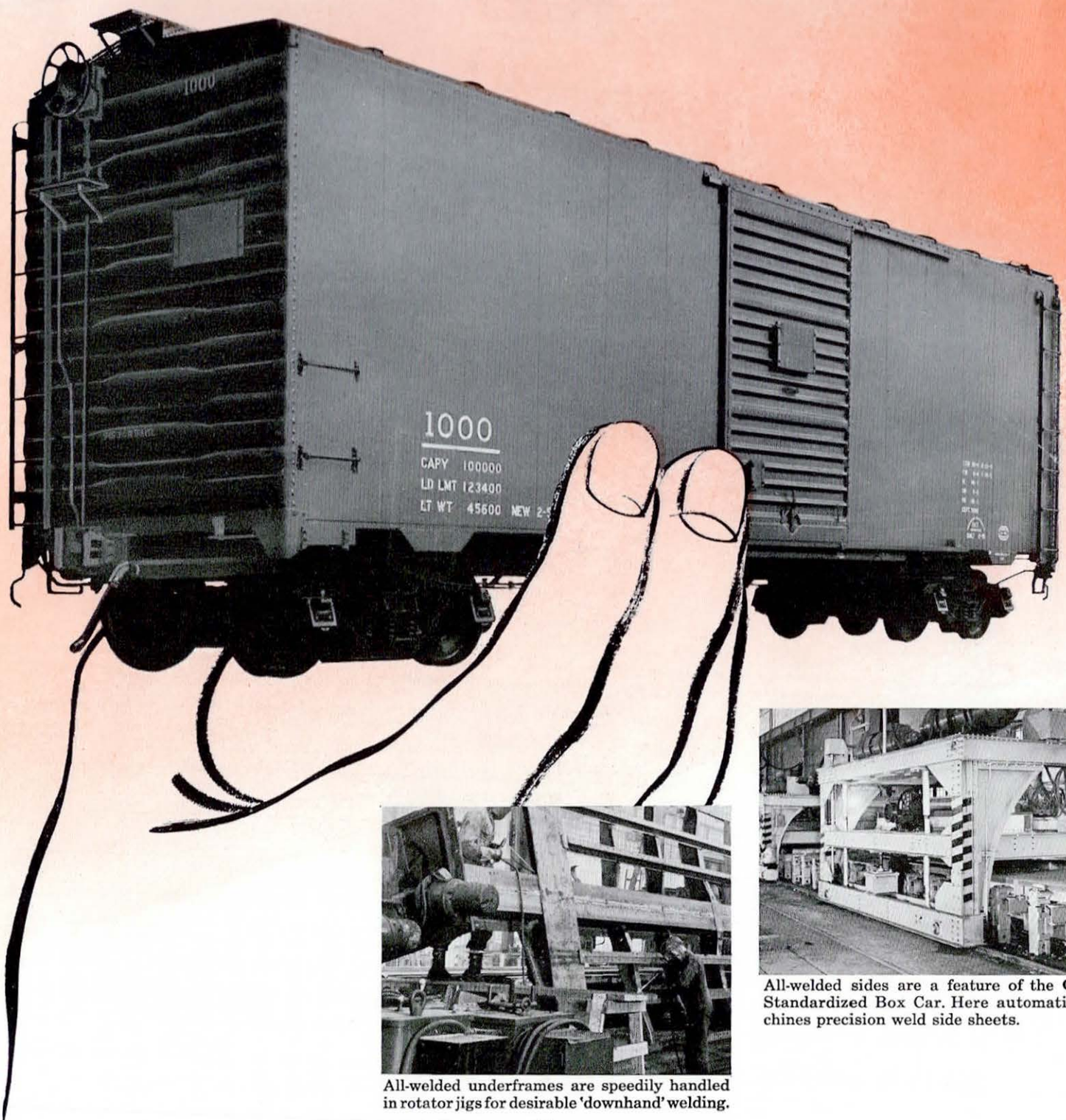
R252

Look to **NORDBERG**

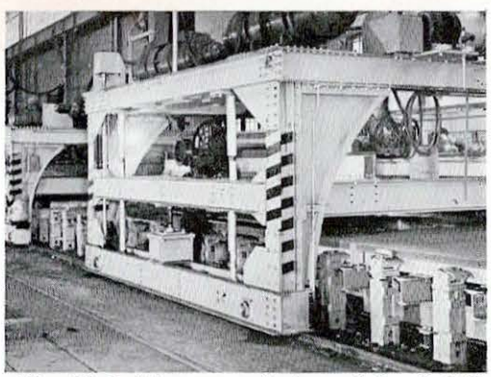
. . . for continually improved **TRACK MAINTENANCE MACHINERY** *to do a Better, Faster Maintenance Job at Lower Cost*

NORDBERG MFG. CO., Milwaukee 7, Wisconsin

The most valuable part of this box car.....



All-welded underframes are speedily handled in rotator jigs for desirable 'downhand' welding.



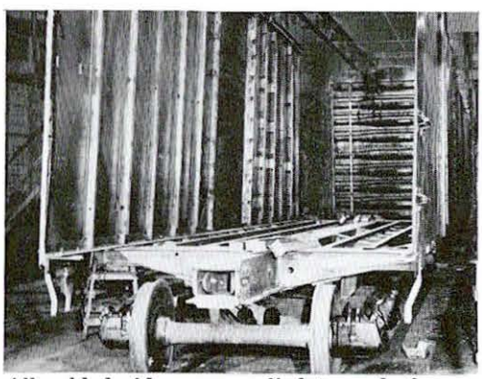
All-welded sides are a feature of the Q.C.F. Standardized Box Car. Here automatic machines precision weld side sheets.

. . . . . is free

Call it *endurance* if you like...it's the "stuff" that keeps a.c.f.-built cars rolling mile after mile when ordinary cars are out for repairs. To put this endurance into a box car, you would have to duplicate the years of research and development ...the highly skilled personnel...and the costly, extensive facilities already yours at a.c.f. without extra charge.

In addition to this FREE maintenance reducing *endurance,* a.c.f.-built, all-welded cars are mass produced on an assembly line basis...the secret of their low unit cost.

Why not put your box car problems in the hands of an experienced a.c.f. Representative today? You'll find he handles them in the same efficient, money-saving way that a.c.f. stamina-built cars handle freight. American Car and Foundry Company, New York · Chicago · St. Louis Washington · Cleveland · Philadelphia · San Francisco.



All-welded sides are applied to underframe. Jigs and fixtures assure duplicated accuracy in assembly-line construction.

a.c.f.

CAR BUILDERS TO AMERICA'S RAILROADS

COUPLERS ACROSS THE CONTINENT!

by

NATIONAL

AAR (Proposed) Type F

AAR Type E

THERE is hardly a train make-up in the mighty fleets operating daily on rail lines serving the continent in which COUPLERS made by "NATIONAL" do not appear. Year around dependability, under all operating conditions, comes from our quality-controlled production and applied engineering skills.

Starting the year 1952 ~ get maximum service and required delivery by specifying "National" for maintenance, rebuilding and new car programs. A-4849

also
AAR TYPE H TIGHTLOCK
and
OTHER AUTOMATIC DESIGNS

NATIONAL stands for the ***ULTIMATE*** in couplers

NATIONAL Products FOR TRANSPORTATION AND INDUSTRY

NATIONAL MALLEABLE and STEEL CASTINGS COMPANY
Cleveland 6, Ohio

COUPLERS • TRUCKS • YOKES • FRICTION AND RUBBER DRAFT GEARS • JOURNAL BOXES AND LIDS Est. 1868

(Continued from page 96)

them of an estimated $700,000 a year in revenues. The commission instituted an investigation, docketing it as No. 30674.

Present finding of the I.C.C. applies to all Montana rates in issue. Except in the case of sugar beets and horses, where no undue discrimination was found, the Montana commissioners have 30 days in which to approve the higher intrastate rates.

The I.C.C. withheld issuance of an order, pending action by the state. Unless such action is taken within the prescribed 30 days, the commission will issue an order to the roads to place the increases in effect.

126 Passengers Killed In 1951 Train Accidents

Train accidents of 1951 resulted in the deaths of 126 passengers, as compared with 149 in 1950, according to the preliminary summary issued by the Bureau of Transport Economics and Statistics of the Interstate Commerce Commission. The compilation, which is subject to revision, follows:

Item	Month of December 1951	1950	12 months ended with December 1951	1950
Number of train accidents*	1,036	1,063	11,064	10,211
Number of accidents resulting in casualties	64	66	583	542
Number of casualties in train, train-service and nontrain accidents:				
Trespassers:				
Killed	67	71	1,094	1,165
Injured	61	69	1,003	1,129
Passengers on trains:				
(a) In train accidents*				
Killed	—	—	126	149
Injured	39	39	1,296	1,432
(b) In train-service accidents				
Killed	1	1	17	24
Injured	154	170	1,766	1,918
Travelers not on trains:				
Killed	1	—	8	5
Injured	88	95	734	765
Employees on duty:				
Killed	42	39	397	358
Injured	2,321	2,345	23,269	21,763
All other nontrespassers:**				
Killed	207	218	1,725	1,697
Injured	701	758	6,212	6,248
Total—All classes of persons:				
Killed	318	329	3,367	3,398
Injured	3,364	3,476	34,280	33,255

*Train accidents (mostly collisions and derailments) are distinguished from train-service accidents by the fact that the former caused damage of $275 or more to railway property in 1950. Beginning January 1, 1951, this minimum was raised to $300. Only a minor part of the total accidents result in casualties to persons, as noted above.

Casualties to "Other nontrespassers" happen chiefly at highway grade crossings. Total highway grade-crossing casualties **for all classes of persons, including both trespassers and nontrespassers, were as follows:

Persons:				
Killed	204	205	1,584	1,576
Injured	513	561	4,302	4,368

New Determinations of Truck, Forwarder Areas

Division 5 of the Interstate Commerce Commission has promulgated new definitions of the maximum terminal areas of motor carriers and freight forwarders within which truck transportation by, or for, such carriers or forwarders is exempt from regulation except as to qualifications and maximum hours of service of employees and safety of equipment. The division's re-

fishin' is fun . . . with care on the run

Here's a fellow that enjoys complete relaxation. He knows his rolling stock, maintenance-of-way equipment, repair facilities and storage areas are safeguarded from costly fires. No chance of a raging fire upsetting schedules, creating lost good will, reducing revenue or causing expensive delayed replacements, thanks to efficient, quick-acting C-O-TWO Railroad Fire Protection Equipment.

Diesel locomotives, whether under construction or already on the line, can be made firesafe with modern approved C-O-TWO Railroad Fire Protection Equipment. There are thermostat fire alarm systems, smoke detecting systems, built-in carbon dioxide type fire extinguishing systems, carbon dioxide type hose rack fire extinguishing units, foam and water type fire extinguishing systems, carbon dioxide type hand portable fire extinguishers and dry chemical type hand portable fire extinguishers, all working together to render highly effective fire protection for diesel locomotives . . . inside . . . outside . . . underneath . . . all designed and engineered to meet your particular requirements.

Also, there are many other railroad properties, especially electric switch gear rooms, fuel oil pump rooms, locomotive terminals, repair shops, signal towers, store rooms and passenger station electric stairways, that need up-to-date C-O-TWO Railroad Fire Protection Equipment. Furthermore, passenger cars and dining-car kitchens are more and more being fitted with durable, easy-to-use C-O-TWO Hand Portable Fire Extinguishers . . . either carbon dioxide type or dry chemical type.

So, whatever your fire hazard problem, let an expert C-O-TWO Railroad Fire Protection Engineer help you now in planning economical, fully approved fire protection facilities. Write today for complete free information!

TRADE MARK C-O-TWO REG. U.S. PAT. OFF.

C-O-TWO FIRE EQUIPMENT COMPANY

NEWARK 1 • NEW JERSEY

Sales and Service in the Principal Cities of United States and Canada

Affiliated with Pyrene Manufacturing Company

MANUFACTURERS OF APPROVED FIRE PROTECTION EQUIPMENT

Squeez-Grip Carbon Dioxide Type Fire Extinguishers • Dry Chemical Type Fire Extinguishers
Built-In High Pressure and Low Pressure Carbon Dioxide Type Fire Extinguishing Systems
Built-In Smoke and Heat Fire Detecting Systems

YOU LOSE 3 WAYS

...WHEN YOU HAVE A DIESEL ENGINE FIRE

The demand of management for proper Diesel engine fire protection is becoming more and more insistent. For practically every Diesel fire results in not just one, but *three* costly losses:

1. **The loss in operating revenue during the Diesel's time down**
2. **The loss created by a tieup all along the line**
3. **The cost of repairing the Diesel**

All over America, operating heads and management are turning to the one best answer—the answer that prevents *all three* losses. Here it is:

INSTALL PYRENE DIESEL FIRE-FIGHTING SYSTEMS

First Choice **OF AMERICA'S RAILROADS**

Pyrene Air Foam

T.M. Reg. U.S. Pat. Off.

PYRENE MANUFACTURING COMPANY

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port also construed the operating authorities of motor carriers and forwarders as they apply at the terminal areas involved.

The report, dated February 11, is the sixth supplemental report in Ex Parte No. MC-37. Its determinations supersede those of the third supplemental report which was made in 1948 and then set aside for the further proceedings that brought forth the present report.

Other reports in the case were concerned with the defining of commercial zones of municipalities and unincorporated communities, since the partial exemption from regulation also applies to trucking operations within such zones.

C.A. & E. Seeks Conversion to Buses

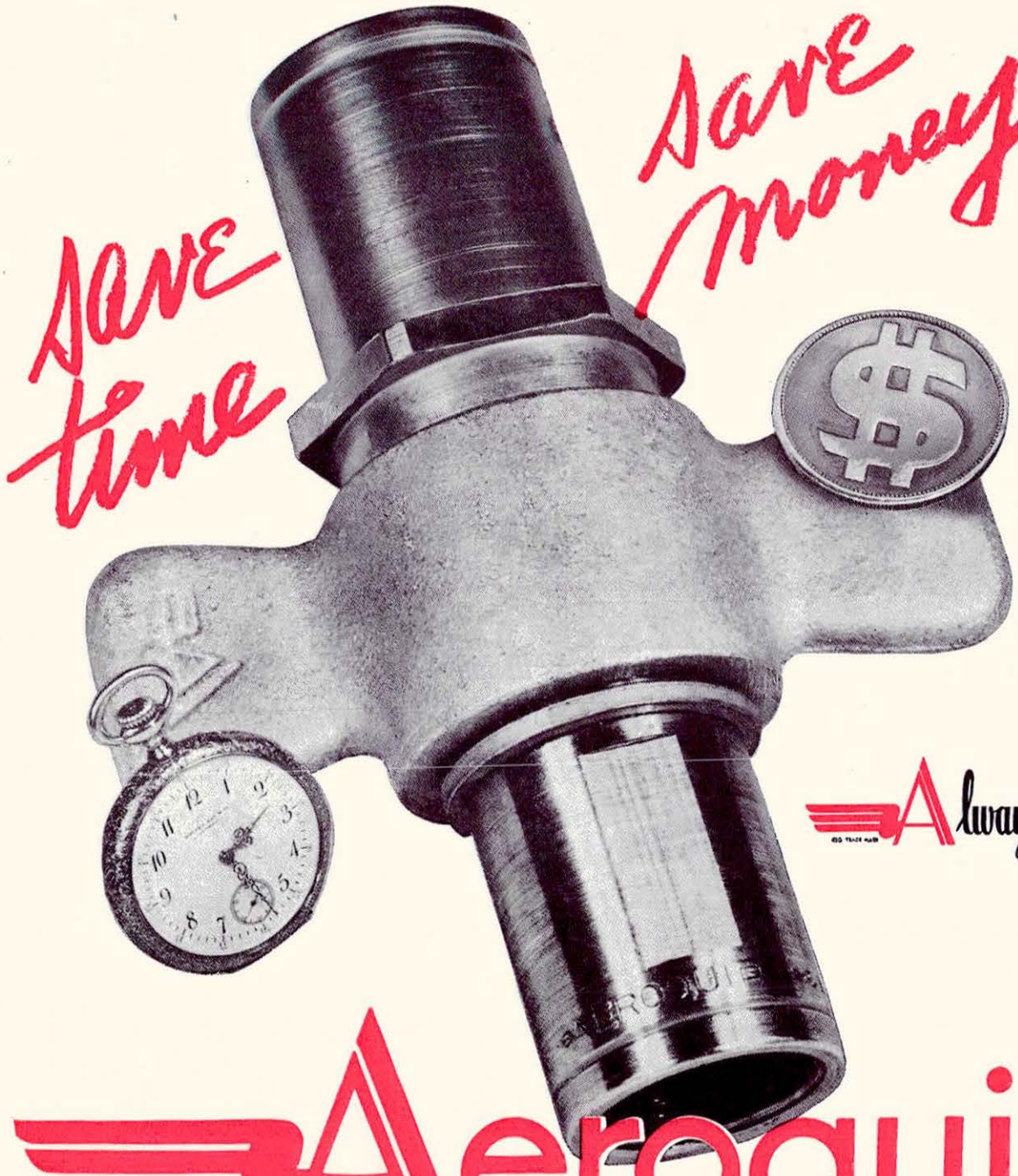
An uncertain future, caused at least in part by construction of a paralleling superhighway, has caused the Chicago, Aurora & Elgin to seek permission of the Illinois Commerce Commission to convert a portion of its electrified railroad operations to bus operation. The road's petition also seeks eventual conversion of the entire 65-mile system, which connects the cities of Elgin and Aurora and a number of western Chicago suburbs with downtown Chicago.

A major complication in the case is that caused by construction of Chicago's new Congress St. superhighway. Present plans call for a new rail line to be laid between the highway lanes for use by the C.A.&E. and by rapid transit trains of the Chicago Transit Authority. However, during certain stages of construction a portion of the present elevated line used by these roads must be torn down and the trains rerouted onto tracks laid on Van Buren street. The C.A.&E. maintains that the increased running time required to negotiate this street operation will divert passengers to parallel and competing carriers.

Another major hurdle lies in allocating costs of grade crossing elimination work, which will be billed against the company, on the theory that the move will benefit the railroad. It is expected that this work will cost in excess of $3 million—an expense which the road is not in a position to meet.

All work on the joint railroad-highway portion of the project has, accordingly, come to a halt pending the Illinois commission's decision on whether or not bus service may be substituted. The city's engineers feel that present plans for the highway must be revised if traffic currently carried on the rail line is diverted to the highway lanes, and they are reluctant to proceed toward construction of a railway line that will not be used. Observers have conjectured that if the railroad drops its rail operation, its passengers, in buses and private cars, might overload the highway as soon as it is opened.

The C.A.&E. is largely a passenger



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Aeroquip provides the fastest, most economical method known for disconnecting and reconnecting charged, fluid-carrying lines. One coupling takes the place of two hand-operated valves. It reduces downtime for service and maintenance and permits speedy interchangeability of accessories. Used with water, hydraulic fluid, oil, diesel fuel, gasoline and refrigerant gas lines.

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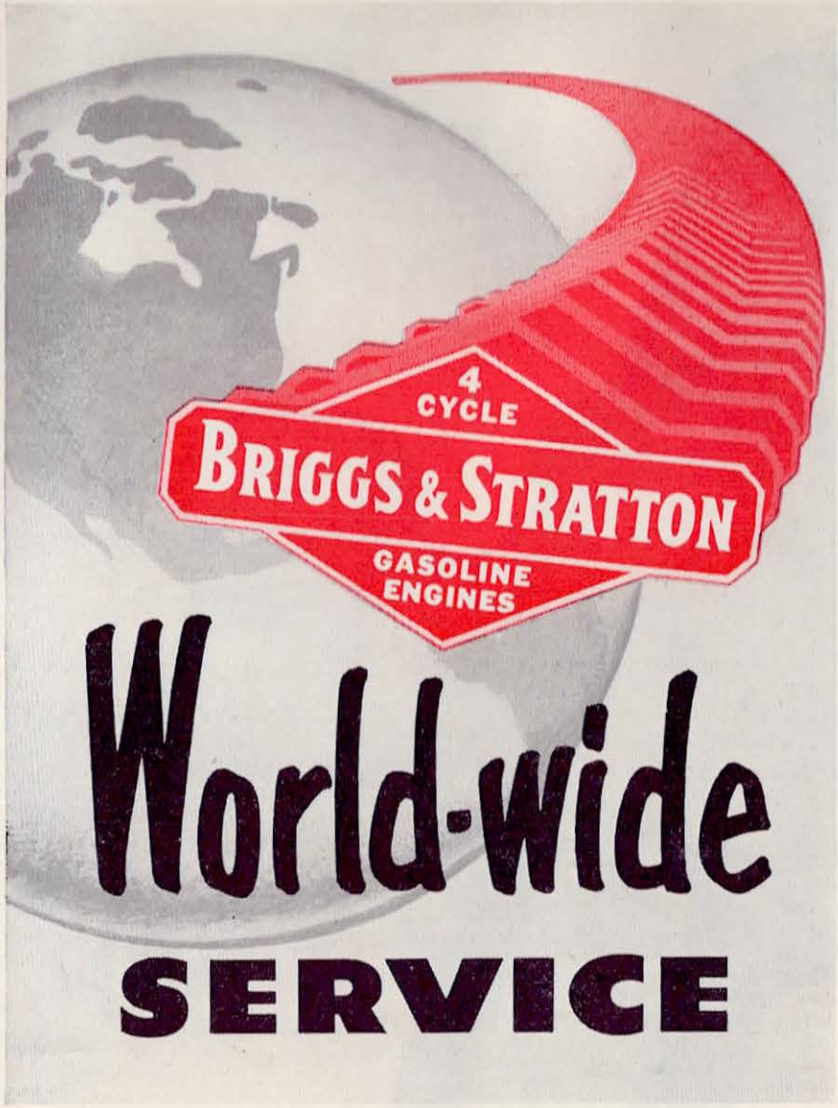
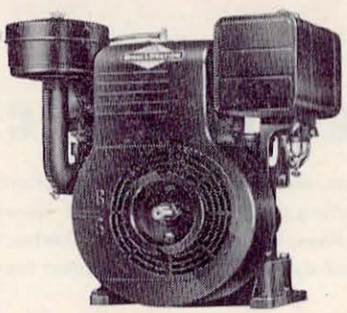
SALES OFFICES: BURBANK, CALIF. • DAYTON, OHIO • HAGERSTOWN, MD. • HIGH POINT, N. C. • MIAMI SPRINGS, FLA. MINNEAPOLIS, MINN. • PORTLAND, ORE. • WICHITA, KAN. • TORONTO, CANADA

AEROQUIP PRODUCTS ARE FULLY PROTECTED BY PATENTS IN U.S.A. AND ABROAD



THE GREATEST SERVICE ORGANIZATION OF ITS KIND IN THE WORLD . . .

Nearby there is a Briggs & Stratton service organization, factory trained and supervised, and with a stock of *genuine* Briggs & Stratton engine parts ready to serve you. These organizations offer complete Briggs & Stratton engine service — tune up, repair, and rebuilding with original Briggs & Stratton parts.



Only Briggs & Stratton maintains such complete, world-wide authorized service facilities. Briggs & Stratton Corporation, Milwaukee 1, Wisconsin, U.S.A.

In the automotive field, Briggs & Stratton is the recognized leader and world's largest producer of locks, keys and related equipment.

carrier. It handles between 21,000 and 25,000 passengers daily—most of them on commutation rates. Only about 10 per cent of its income is derived from freight traffic. The line has not realized a profit from railroad operations since 1932 except in one year—1942.

C. of Pa. to Move Offices to Allentown

Operating and general offices of the Central of Pennsylvania, which have been located at Mauch Chunk, Pa., for more than a half century, will be moved to Allentown, Pa., about April 1.

In announcing the move, E. T. Moore, president of the C. of Pa. and the parent Central of New Jersey, said:

"This is a logical and important step because of the greatly expanded freight yard we now are constructing at Allentown. The locating of our major Pennsylvania operating and general offices at Allentown will enable a more efficient and coordinated operation of our new facilities.

"The new yard, which will be completed and in full operation by the fall of this year, will be one of the major freight handling centers in the east and will be the focal point of Jersey Central Lines operations in Pennsylvania."

All offices to be moved are now located in the railroad owned Navigation building in Mauch Chunk. At Allentown the principal operating offices will be located in the railroad's passenger station, which will be remodeled into a combination office building-passenger station.

About 30 officers and employees will be involved; the offices being moved include those of the superintendent and his staff, the chief dispatcher and his staff, the maintenance of way department and the claims department. After the move, the various C. of Pa. offices will be located in the Allentown area as follows:

Allentown passenger station—Superintendent and staff; chief dispatcher and staff; telephone exchange; maintenance of way department.

Bethlehem engine terminal — Motive power department; signal department.

Allentown National Bank building — Freight traffic department; passenger traffic department.

Allentown freight station—Police department; claims department.

The Navigation building now occupied by the railroad and some other tenants, will probably be sold after the move is made.

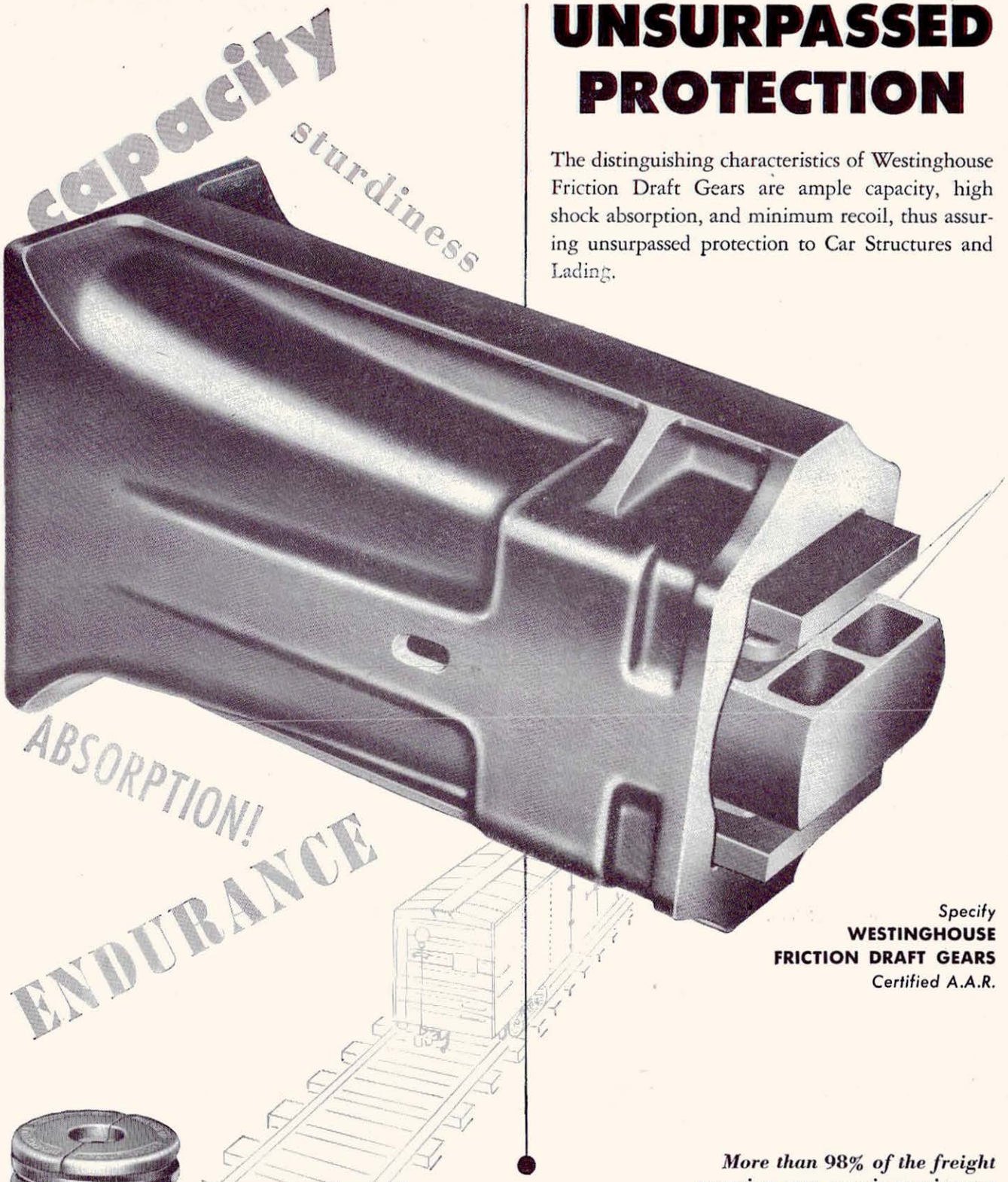
Amortization Certificates Awarded to 10 More Roads

Certificates of necessity authorizing accelerated amortization of facilities for tax purposes were approved for 10 railroads during the week of January 28 to February 2, the Defense Production Administration announced last week. The certificates were approved by D.P.A. upon recommendation by the Defense Transport Administration.

The 10 roads for which certificates were approved are listed below. The

UNSURPASSED PROTECTION

The distinguishing characteristics of Westinghouse Friction Draft Gears are ample capacity, high shock absorption, and minimum recoil, thus assuring unsurpassed protection to Car Structures and Lading.



Specify
WESTINGHOUSE
FRICTION DRAFT GEARS
Certified A.A.R.

More than 98% of the freight carrying cars now in service are A.A.R. construction, and over 96% have Friction Draft Gears.

CARDWELL
FRICTION BOLSTER SPRINGS
for A.A.R. and Long Travel Springs

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Cardwell Westinghouse Co., Chicago
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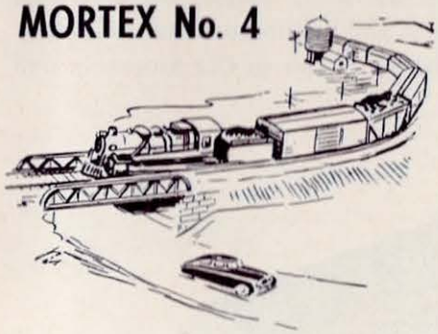
CONSERVE ROLLING STOCK, YARD and Right-of-Way EQUIPMENT with MORTEX No. 4



- Protects against rain and moisture
- Protects against salt brine
- Protects against acid and alkali fumes
- Odorless
- Non-toxic
- Vermin-proof

One application of this tested coating is far superior to paints and cut-back asphalt products. It's the most practical low-cost rust preventive for roofs, interiors and underframes of steel freight and refrigerator cars, covered hopper cars used for soda ash, lime and similar products, ice bunkers and equipment exposed to acid fumes and gases.

It's tops for steel bridges, cooling system ducts and sumps, outside storage tanks, tool houses and bins.

Will not run, sag, blister or craze at temperatures up to 250° F.

EASY TO APPLY

Mortex No. 4 can be put on with brush, trowel or spray. It adheres to any clean dry surface and forms a rich, dull black finish.

TRY IT YOURSELF

Most railroads get Mortex No. 4 in 55 gallon drums, but you can order either a 1-gallon or a 5-gallon can and put it through your own comparative tests.

Write for literature

J. W. MORTELL CO.
Technical Coatings since 1895
563 Burch St., Kankakee, Ill.

percentage figure in each case shows the amount that may be written off in five years:

Cambria & Indiana, $225,000, 55 per cent.

Cincinnati, New Orleans & Texas Pacific, $8,765,000, 55 per cent.

Denver & Rio Grande Western, $832,950, 55 per cent.

Duluth, Missabe & Iron Range, $83,340, 50 per cent.

Illinois Central, $647,500, 70 per cent.

Louisville & Nashville, $13,364,868, 55 per cent.

New York Central, $5,153,890, 55 per cent; and $367,500, 70 per cent.

Southern, $11,315,000, 55 per cent.

Union Pacific, $1,891,740, 70 per cent.

Western Maryland, $2,584,918, 55 per cent.

Michigan U. Establishes Transportation Institute

Establishment of a Transportation Institute within the college of engineering at the University of Michigan was approved by the university's regents on February 15.

President Harlan Hatcher, in announcing the action, said the institute was being established "to meet the serious need for better understanding of the relationships between the various means of transportation and their efficient utilization in the best public interest."

The institute will serve as a coordinating agency in focusing attention on problems of transportation and mobilizing resources for study of specific problems. This will be done in three ways, the president said:

First, by in-service training programs, institutes, short courses and conferences.

Second, by study and research in the many phases of transportation, to be sponsored through scholarships, fellowships and grants.

Three, by assisting in development of a transportation library as a facility for study and research and as a center for transportation information.

Rio Grande Bargain Fares Boost Traffic and Revenues

An immediate, appreciable increase in total revenue, as well as in number of passengers, followed the introduction of bargain round-trip fares for on-line travel by the Denver & Rio Grande Western, effective October 29, 1951.

On that date the railroad put into operation a round-trip fare basis of 1 1/3 times the standard first-class or coach fare, the going journey to be taken on Friday, Saturday, Sunday or Monday of any week, and the final return limited to 25 days following date of sale. The bargain tickets are

ANNOUNCEMENT

Attention: CHIEF ENGINEERS—
ENGINEERS, M. W. —
SUPERVISORS
of Work Equipment—

We are pleased to announce that we have negotiated an agreement with the American Tractor Equipment Corporation to manufacture and sell their ATECO line of earth-moving equipment such as bulldozers, road builders, scrapers, front loaders, etc. through regular authorized distributors in all territories east of the Mississippi River.

See us at our headquarters, Palmer House, during the A.R.E.A. Convention.

GREENVILLE STEEL CAR COMPANY
Greenville, Pennsylvania

Continuous research and development at AMCRECO

Means lower maintenance cost here!

Amcreco *Lowry Process* **Creosoted Products**

The ever increasing life expectancy of Amcreco Creosoted Products is no accident. It is the direct result of continuing research and development at Amcreco. With the tried and proven Lowry pressure creosoting process as the foundation, refinements and improvements in treatment techniques have in many instances doubled and even tripled service life in the space of the last 25 years.

Backed by this progressive program, Amcreco Creosoted Products are your best assurance of long life and minimum maintenance. For greater all-around economy on your next job, specify Amcreco.

- Adzed and Bored Cross Ties
- Bridge Ties
- Piles
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AMERICAN CREOSOTING COMPANY
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COLONIAL CREOSOTING COMPANY INCORPORATED

AMCREC LOWRY PROCESS CREOSOTED WOOD

GEORGIA CREOSOTING COMPANY INCORPORATED

GENERAL SALES OFFICE — CHICAGO, ILLINOIS

Pressure-treated for strength that lasts!

honored between all points and on all trains except the "California Zephyr" (on which a large portion of the patronage is interline).

The new fare level and return privileges produced an immediate increase in November of 10.6 per cent in revenue from local tickets on the road as a whole, compared with the same month in 1950. In December, local revenue increased still further, to 15.5 per cent over a year ago. Number of passengers carried, of course, increased still more.

Prior to October 29, there had been in effect on the road round-trip fares on the same 1 1/3 basis, but the going journey was restricted to week-end dates and the return was limited to five days from date of sale. It was determined that these restrictions did not conform to travel habits of the average potential customer.

January Employment

Railroad employment decreased 1.71 per cent—from 1,243,095 to 1,221,846—from mid-December to mid-January, the Bureau of Transport Economics and Statistics of the Interstate Commerce Commission has reported. Employment in January 1952 was 2.57 per cent below the same month a year ago.

The index of employment, based on the 1935-1939 average as 100, was estimated at 124.5 for January. This compared with an estimate of 123.7 for December, and with 127.8 in January 1950.

January employment was below that of December in six of the seven groups. The largest drop, 5.04 per cent, was in transportation employees (other than train, engine, and yard). Other decreases ranged from 3.13 per cent for maintenance of way and structures employees, to 0.45 per cent for maintenance of equipment and stores employees.

The sole increase in employment from mid-December to mid-January was 0.08 per cent in the group embracing executives, officials, and staff assistants.

As compared with January a year ago, January 1952 employment was down in five groups and up in two. The increases were 1.74 per cent in executives, officials and staff assistants, and 0.35 per cent in professional, clerical, and general employees.

Decreases during the year ranged from 4.18 per cent in the maintenance of equipment and stores group, to 0.51 per cent in the number of transportation employees (yardmasters, switchtenders, and hostlers).

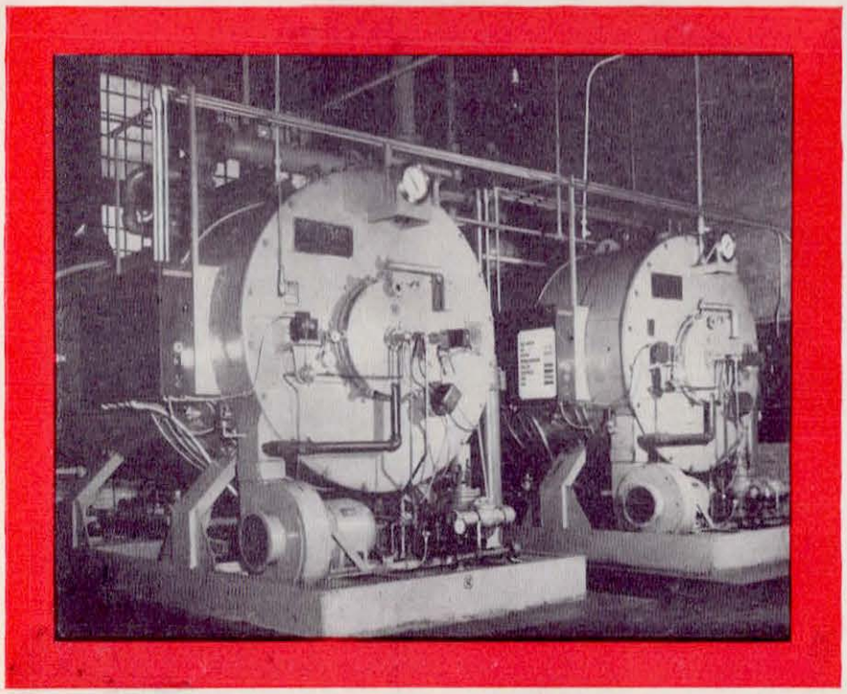
Report on Accident At Wyuta, Wyo.

Failure to operate the following train in accordance with signal indications was the cause of the rear-end collision between two Union Pacific streamliners which occurred November 12, 1951, at Wyuta, Wyo. That is the finding of a report by the Interstate Commerce Commission, which also said that "adequate flag protection was not provided for the preceding train."

The report followed through to recommend that the U.P. extend its automatic cab-signal system to the unequipped 314 miles of its 990-mile line between Ogden, Utah, and Omaha, Neb. The accident occurred about 71 miles east of Ogden on one of the unequipped sections, which is the 176-mile segment between Ogden and Green River, Wyo.

The next 251 miles eastward from Green River to Laramie, Wyo., are equipped. Then there is an unequipped section of 56 miles between Laramie and Cheyenne, Wyo., from which an equipped segment extends 425 miles eastward to Columbus, Neb. The 82-mile section between Columbus and Omaha is now unequipped, but installation work there is already under way.

The commission's report, No. 3443, was by Commissioner Patterson, and the investigation out of which it came was conducted by the Bureau of Safety. Eleven passengers and six employ-



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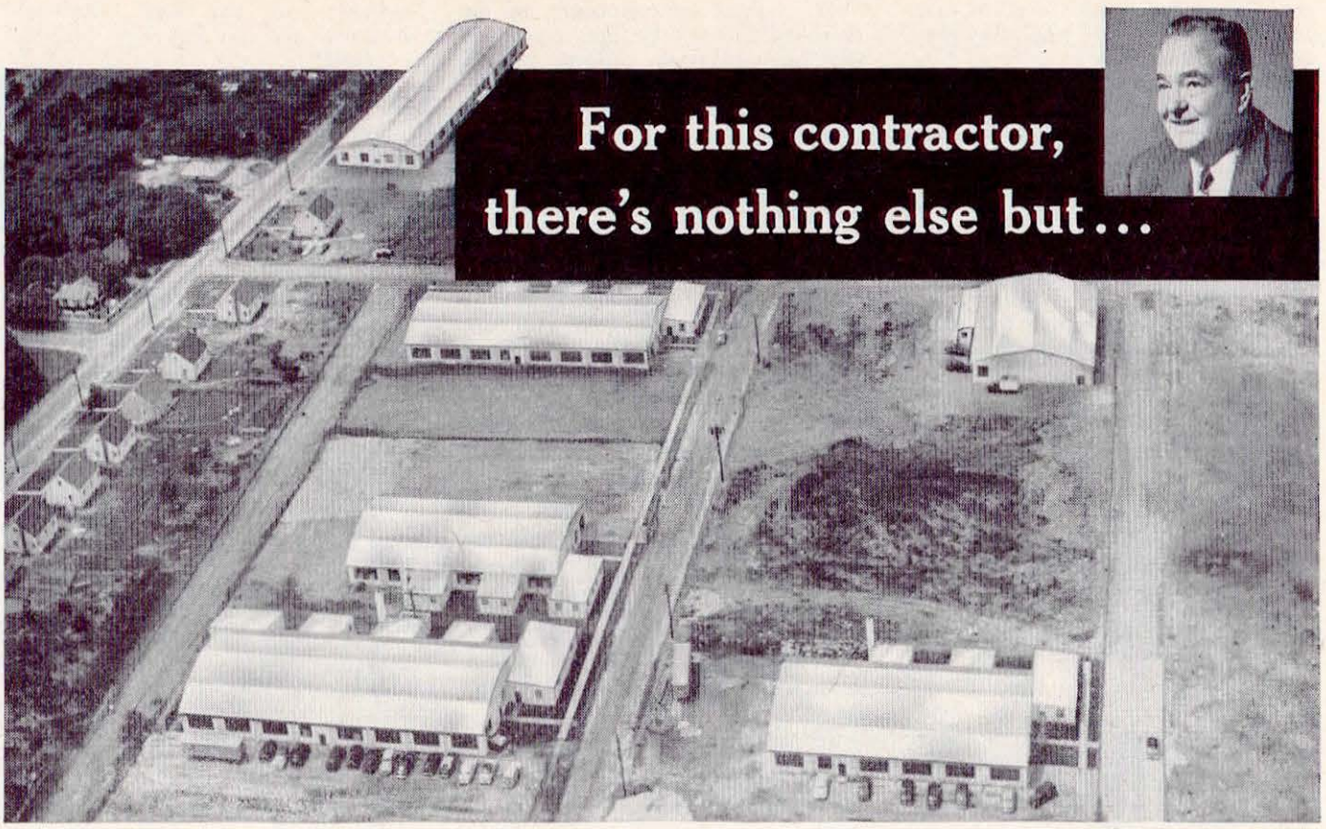

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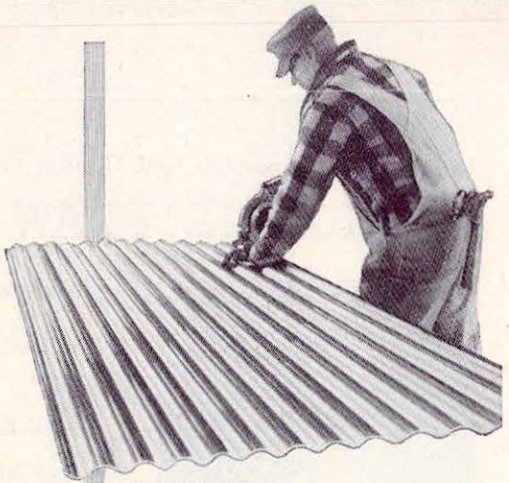

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ees were killed in the accident, and 142 passengers and 17 employees were injured.

The "following train" was No. 102, the "City of San Francisco," and the "preceding train" was No. 104, the "City of Los Angeles." Both were eastbound, and No. 102 was traveling about 77 m.p.h. when it ran into No. 104, which had just got started after having been stopped so its enginemen could determine the indication of a signal. Also involved was a freight train, which was in the clear on a siding, but it was struck by derailed equipment of the streamliners.

In Snowstorm

The accident occurred in the forenoon (11:27 a.m.), but heavy wet snow was falling at the time; and lenses of the signals were covered with ice and snow. The signals are equipped with hoods which serve as snow shields, but "when wet snow is blown directly against the lenses, . . . as it was on the day of the accident, the snow shields are not effective in preventing the snow from covering the lenses . . ." the report said.

U.P. trains running under such conditions were governed by this operating rule: "In foggy or stormy weather, engines must approach all signals with great care, stopping if necessary to determine the indication."

The signals are automatic, of the three-indication, color-light type; and they are approach lighted. Signals 9242, 9224, and 9214, governing eastbound movements, are located, respectively, 2.55 mi. west, 4,157 ft. west, and 1,386 ft. east of the point of collision.

The point from which No. 104 was getting started was short of signal 9214, so that train was still occupying the block of signal 9224. That signal, therefore, displayed a red aspect for train No. 102, and signal 9242 displayed a yellow aspect. The latter called for an immediate reduction in speed to 20 m.p.h., "and as much slower as necessary in order to be able to stop before passing the next signal."

No. 102, as the report put it, "passed signals 9242 and 9224 and while traveling at a speed of 77 m.p.h. it struck the rear end of No. 104." When the signal system was tested after the accident, it functioned properly.

No. 104 was a 12-car train, while No. 102 had 13 cars. All of the cars were of "lightweight steel" construction. Each train was hauled by a three-unit diesel-electric locomotive.

The collision derailed all cars of No. 104, and "demolished" the three rear cars which were two sleepers and an observation-sleeper. The eighth and ninth cars (sleepers) were "badly damaged" while the other seven cars included four that were "somewhat damaged" and two that were "slightly damaged."

All equipment of No. 102, except its rear car and the rear truck of the twelfth car, was derailed. The three diesel units, the first car (a mail car), and the fifth to ninth cars, inclusive, were "badly damaged," those cars having been a coach, two diners, a lounge car, and a sleeper.

The freight train on the siding consisted of a three-unit diesel and 90 cars. The thirty-sixth to forty-third cars, inclusive, were derailed when struck by the derailed cars of the streamliners.

The engineman of No. 102 and a maintainer, who was also on that engine, were among the employees killed. The control compartment of that train's first diesel unit "was so badly damaged . . . that the position of the controls at the time the accident occurred could not be determined," the report said.

It went on to summarize evidence indicating how the signal indications had become obscured by the formations of snow and ice. It was because No. 104's enginemen "could not see a light" in signal 9214 that they had stopped their train short of that signal.

The rear flagman of this train was killed and the commission's investigators found "no surviving witness" who could testify as to what action that flagman took. He was seen on the rear car by the flagman of the freight train when the streamliner passed the siding's west switch, which is 4,083 ft. short of the point of collision.

The fireman of No. 102 survived. He stated that he did not see the aspects of either signal 9242 or 9224, but that both the engineman and the maintainer "called each signal as indicating 'proceed.'" He "assumed that they could see through the windshield from the right side of the control compartment more distinctly than he could see from the left side."

Meanwhile, he "did not observe a fusee or hear the explosion of a torpedo." And he also said, that, because of track curvature and the presence of the freight train on the siding, he and his associates on No. 102's engine could not see a red oscillating light on the rear of No. 104, "until they were closely approaching the rear of that train." The engineman made an emergency application of the brakes "immediately after the light became visible," the fireman also testified.

"Weather conditions similar to those which prevailed on the day of the accident are not unusual along the line of this carrier in this vicinity," the commission said in leading up to its recommendation that cab signals be installed.

"If a cab-signal system had been in service it is probable that this accident would have been averted," the report added.

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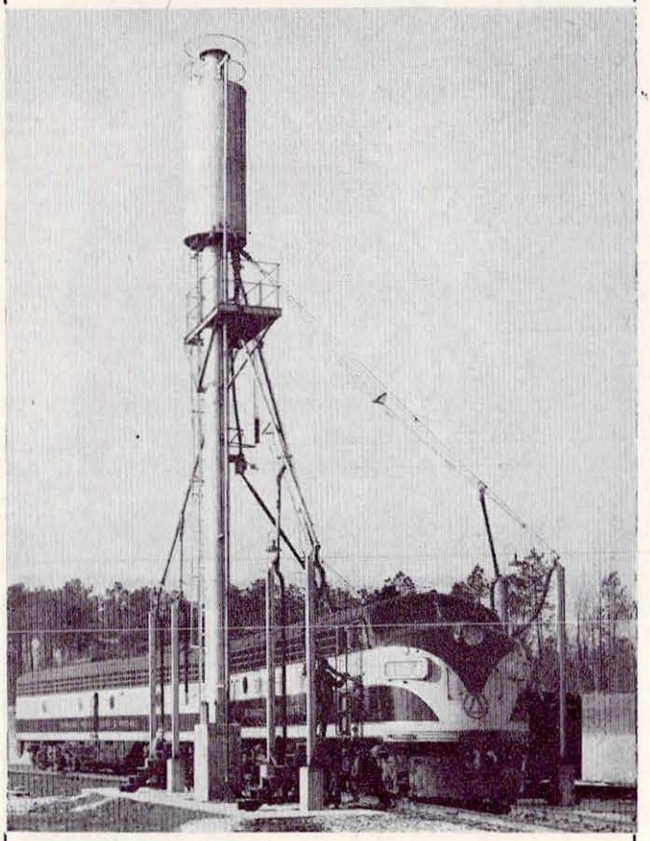

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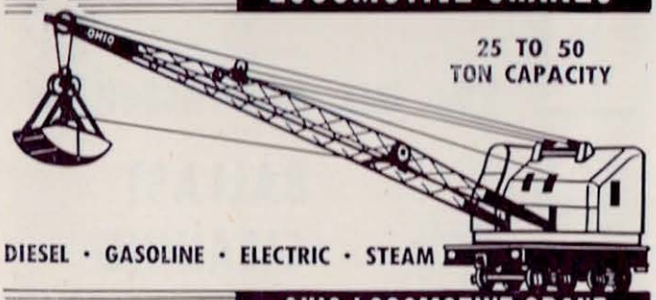

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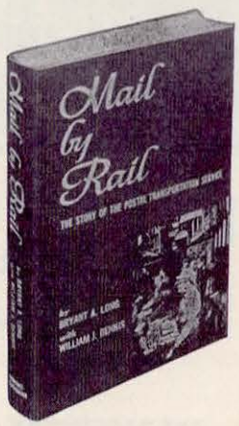

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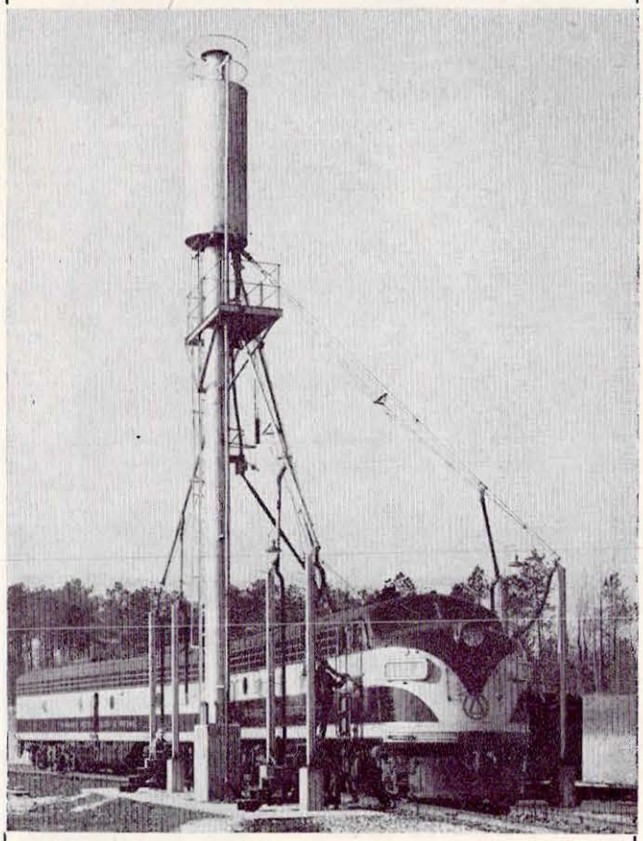

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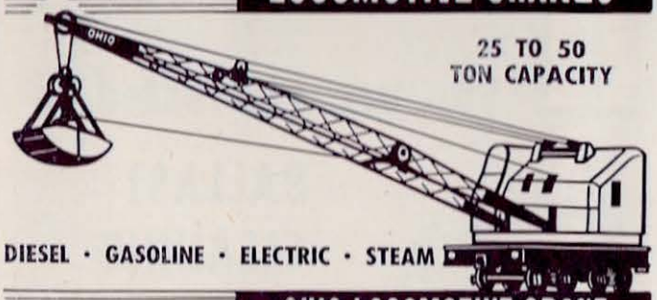

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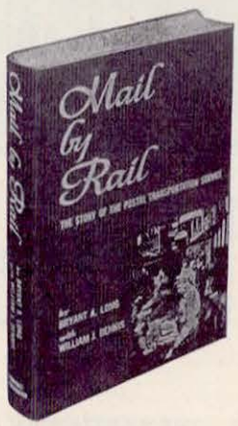

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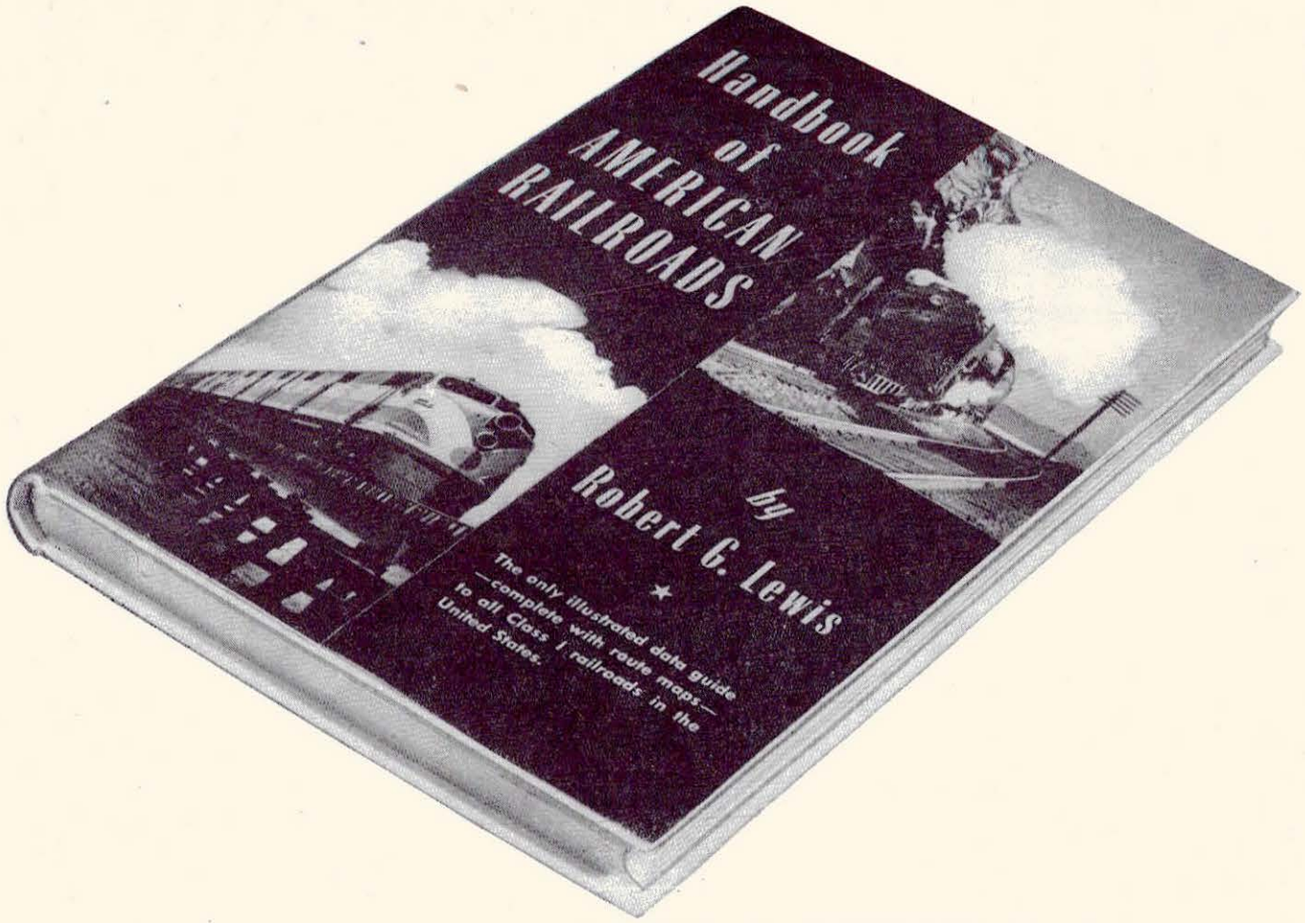
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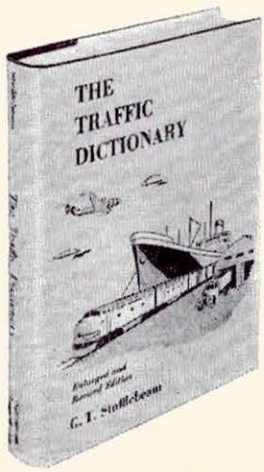

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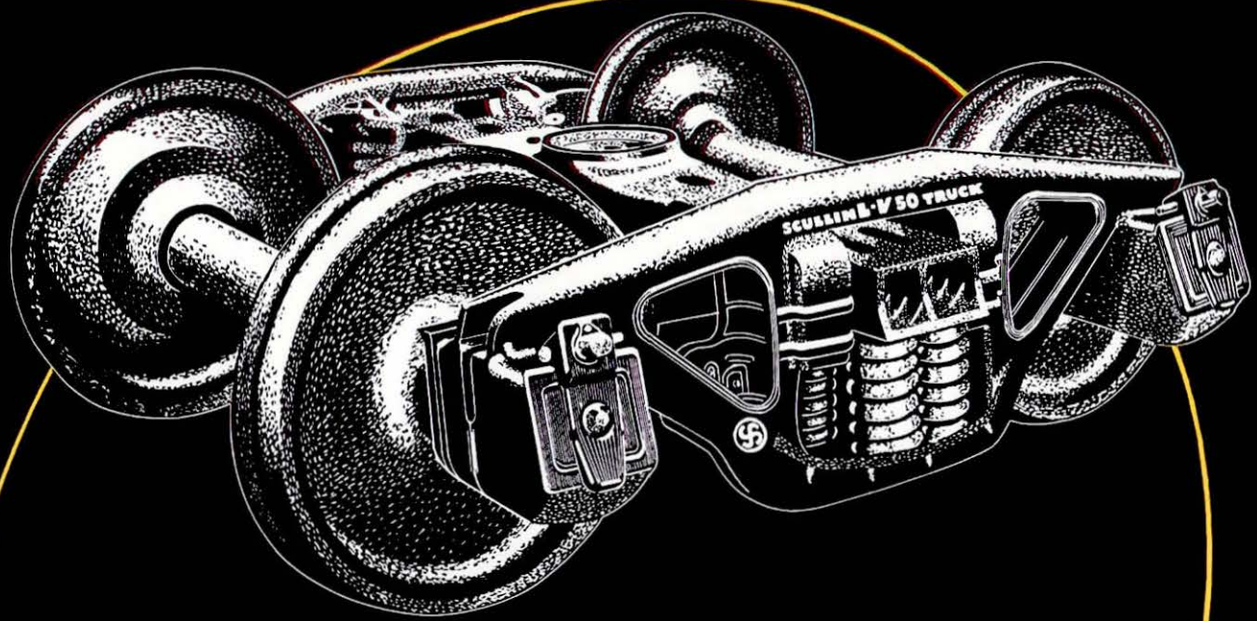

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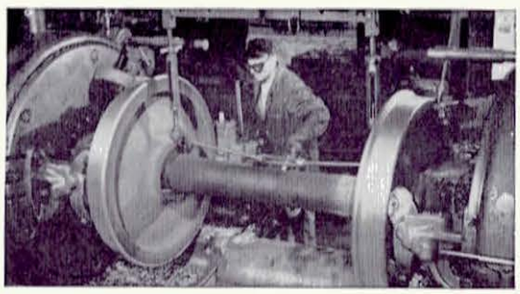

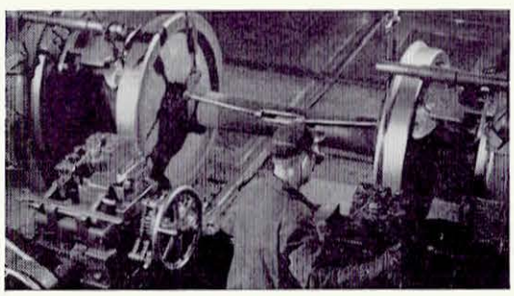

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